Avanade Production Tool Management User Guide

Dynamics 365 for Operations

This document contains confidential and proprietary information of Avanade and may be protected by patents, trademarks, copyrights, trade secrets, and/or other relevant state, federal, and foreign laws. Its receipt or possession does not convey any rights to reproduce, disclose its contents, or to manufacture, use or sell anything contained herein. Forwarding, reproducing, disclosing, or using without specific written authorization of Avanade is strictly forbidden.

The Avanade name and logo are registered trademarks in the US and other countries. Other brand and product names are trademarks of their respective owners.

avanade

©2018 Avanade Inc. All Right Reserved.

Document Information

Document Title:	User guide
File Name:	Avanade Production Tool Management user guide.docx
Author(s):	Zamir Gori, Swasti Sundar

Document Revision History

Version	**Date**	**Changed By**	**Items Changed Since Previous Version**
1.0	02/25/2017		Initial Version

version management

Version	**Date**	**Author**	**Page and type of change**	**Remarks**
6.0-1.0	30.04.2012	Norbert high	Corrections / modifications to version AX 2012	
6.0-1.1	27/08/2013	Norbert high	new layout	
6.0-1.2	1/28/2015	Norbert high	Update Contents	
6.2-1.3	6/3/2015	Norbert high	Upgrade to AX2012 R3 CU8	
6.2-1.4	3/13/2016	Olaf Schwarz	Use of quality control orders for equipment; Chapter KCS.net License Import away	
6.2-1.5	6/1/2017	Norbert high	Upgrade to AX2012 R3 CU11 and New integrations (articles, resources, equipment, purchase requisitions, accounts receivable, new activities)	KCS.net Development Tools Version: 6.3-1.9
	2/13/2017	Norbert high	This version is only used for upgrade to D365	
	2/25/2017	Zamir Gori, Swasti Sundar	New D365 screens are used in this version of user document	

©2018 Avanade Inc. All Right Reserved.

1 Overview Resource Management /Overview tool administration 4
1.1 Introduction 4
1.2 Composition structure 5
1.3 Entry into the module resource management 5
1.4 Security, roles and permissions /Security, role and privileges 6
2 Establishment and management of resource management 6
2.1 Resources /tool 6
2.1.1 Information about register 7
2.1.2 Resources Positions / tool components 15
2.1.3 Assignment of resources to resources positions /Assignment tool components to a tool 17
2.1.4 Model structure /Model structure 17
2.1.5 Cross-reference /tool Usage 19
2.1.6 Bookings for equipment and working capital positions / Postings tools and tool components 21
2.1.7 Detailed representation of the postings / postings detail 22
2.2 Activity Management /Activity management 25
2.2.1 Manually Creating Activities /Manual creation of activities 27
2.2.2 Mass production of activities /Bulk creation of activities 27
2.2.3 Using automatic Activities /Use automatic activities 28
2.2.4 Quality testing contracts for activities /Quality order for activities 29
2.3 Performance assessment /Usage control 30
2.4 Settings and parameters /Setup and Parameter 31
2.4.1 Investment of new resources groups /Create new tool groups 31
2.4.2 Plant new position Categories /Create new component categories 31
2.4.3 System of new model structures /Create new model structure 32
2.4.4 Conditioning of new activity groups /Create new activityGroups 32
2.4.5 Conditioning of new release status /Create release status 33
2.4.6 Creation and maintenance of activity templates /Create and maintain activity templates 33
2.4.7 Resource parameters / Tool administration parameters 34
2.5 Reports of Resource Management /Reports tool administration 38
2.6 WorkSpace for Production tool management / Tool administration 39
2.7 Integration overview resources and resource positions /Integration overview tools and tools components 41
3 Installation 43
3.1 Requirements /Prerequisites 43
3.2 Configuration /system configuration 433
4 Disclaimer 43

©2018 Avanade Inc. All Right Reserved.

1 Overview Resource Management /Overview tool administration

1.1 Introduction

The Avanade resource management/Tool administration asset is intended for a tool-intensive industry such as plastic injection molding and metal die casting. The use of master data module is conceivable in any industrial operation, where test equipment, tools, fixtures or equipment are used. With 'Tool administration' module, simple and complex tools can be managed, the tools can be assigned to a product and can use a certificate provided.

It manages various information in the master data:

- General information
- Procurement information
- Technical information
- Usage control data
- Documents and attachments

The structuring takes place on a model structure, which is represented in a hierarchical form in the system. The performance data are represented in a compact on the steps to the top.

The parts produced by using the equipment (products) can be compared with the planned values and monitored in the form of a usage assessment. The respective amounts are automatically stored in the ready message of the production orders or operations in the resource management.

You can each decide whether to feedback due to the produced parts or as time feedback at specific intervals respectively after the end of a process step carried out. For external production values through purchasing (delivery) will be registered. If the tool is used at a customer's usage message is sent via the delivery.

The Avanade resource management is divided into three modules:

- Master Data Module
- Usage assessment
- Activity management

The master data module is a prerequisite for the other modules.

Furthermore, this module allows usage control with the number of parts produced can be monitored over a plan value. With type management activities, can as repair or maintenance are allocated and monitored a tool. The activities are in production planning (Module: Master planning) queried and correspondingly result in a warning. You can enjoy the activities automatically trigger on events (Cyclically amount or time, only quantity Depending intervals).

Production planning of Dynamics 365 for operations considers the "activities" of the equipment, such as repairs or maintenance projects (Hard, planning is discontinued or soft, planning continues).

- Timed for example from 01.07. until 10:07.
- Flow-dependent, for example, revision by 50,000
- Frequency, for example, always after 5 productions

The resource management is integrated into the Dynamics 365 for operations quality assurance. This includes:

1. Use of quality inspection orders for equipment Activities
2. Use of resources in quality inspection orders as test equipment
3. Create resources as a test instrument

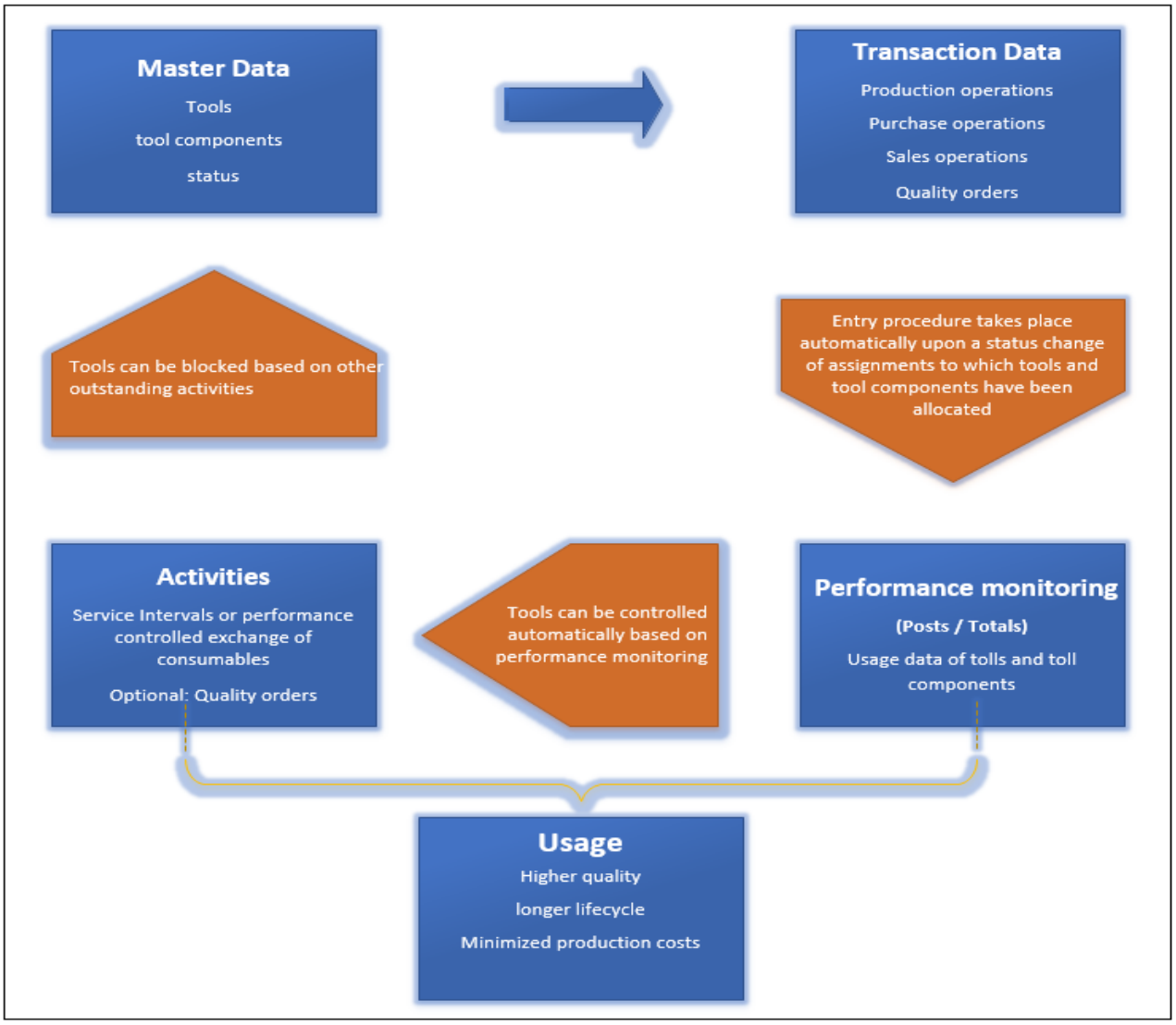
All three integration points are optional and can be used independently.

avanade
©2018 Avanade Inc. All Right Reserved.

Likewise, the resource is in the following DYNAMICS 365 modules integrated (all optional)

- Create resources as Article
- Create resources as a resource
- link resources with the banking book
- Resources are used for a vendor
- Resource are used for a customer
- Resources are linked to a project (Invest and maintenance)
- Activity triggers a purchase requisition

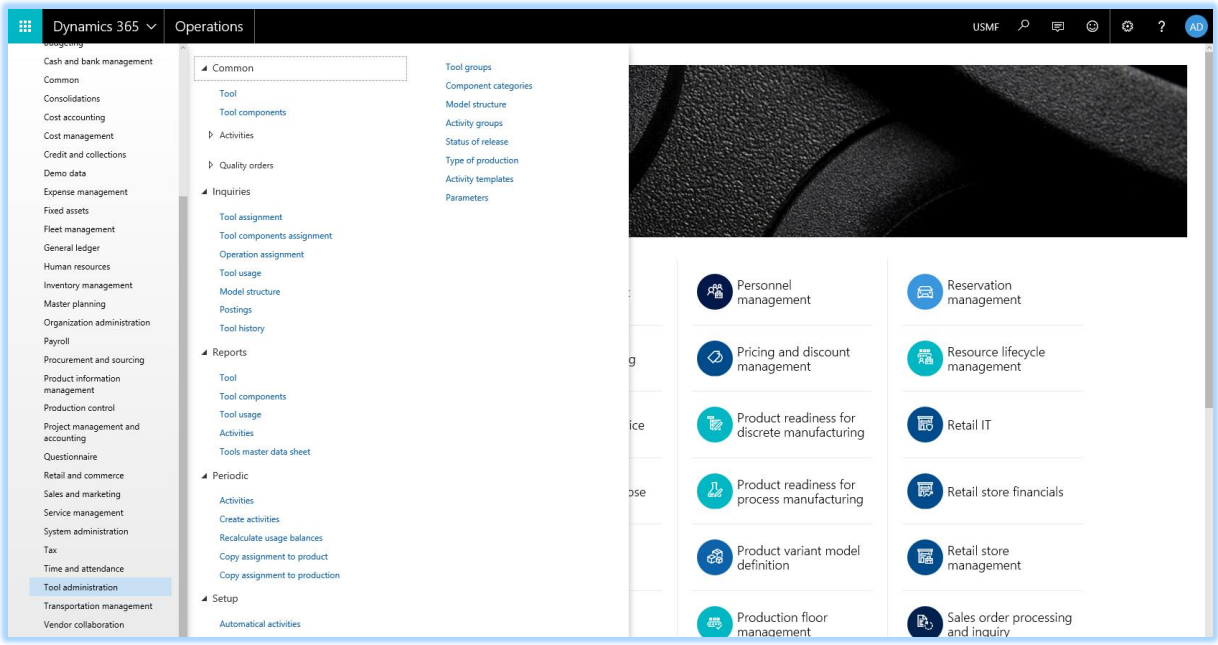
1.2 Composition structure



1.3 Entry into the module resource management

You will find the module resource management / Tool administration either by selecting the basic menu or via the navigation area. Here are all the transactions of the implementation of resource management. The navigation, handling and operation here is no different to the Microsoft standard modules.

avanade
©2018 Avanade Inc. All Right Reserved.



1.4 Security, roles and permissions /Security, role and privileges

The Avanade Resource management module is fully integrated in the role-based authorization concept of Microsoft Dynamics 365 for operations. All calls, transactions, reports and queries of the module resource management are included in the task-based standard roles of Microsoft Dynamics 365 for operations.

Typically, these settings are managed by an administrator.

Function Description

2 Establishment and management of resource management

The Master Data module allows management of tools such as jigs, gauges, equipment, measuring equipment, etc., or the management of multi-part complex tools which, inter alia as a plastic injection molding or metal die casting.

The simple tools can be managed as a resource with a tool strain without additional structures. In tool master general information, information about the procurement, technical information, and the information can be saved to usage control.

To model complex tools, equipment positions can be created and assigned to the resources.

To the superordinate structuring of various resources is the model structure. It can be detected models and brought into a hierarchy. Each of these models can be one or more assigned resources. The usage of the resources within a model structure are compressed on the steps to the top and can be viewed cumulatively.

2.1 Resources /tool

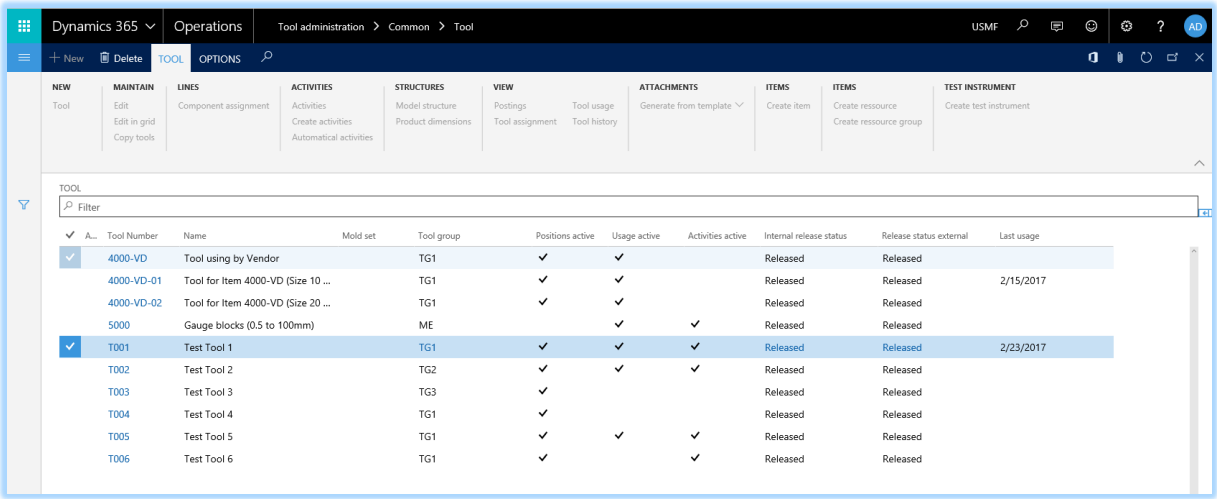
- ***Call: / Tool Administration> Common> Tool***

In the field group "criteria" filter criteria are defined. After the flag "locks" put resources are for each criterion only appears to meet the criteria.

©2018 Avanade Inc. All Right Reserved.

2.1.1 Information about register

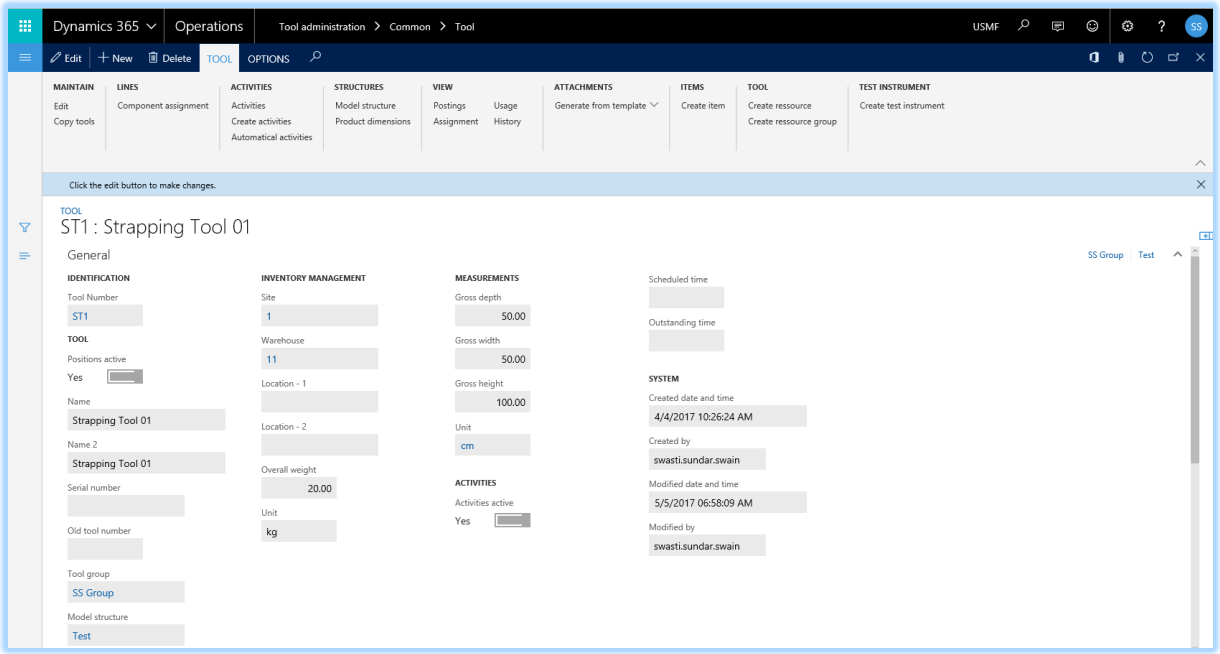
The registers can be customized via Personalization. Therefore, the following list is only a standard listing. Each of these fields is also included in the complete register.



Information register Overview	Description
Activity due /Activities due	Indicates if an activity is due. The parameters, the behavior of the system are defined when due or overdue activities (eg screen message).
Resource number /tool Number	Unique number of resources
Set Tools /Mold set	Indicates that a combination of disparate products from this tool results.
Designation /Surname	Identification of resources
Resource group /tool Group	Resource groups are used to group, filter and sort of screen displays and printouts.
Positions active /position active	Flag is active - resource positions to resources available
Performance active /Usage active	Flag is active - determines the usage of the equipment and logs.
Activities active /activties active	Flag is active - there are activities the resources allocated (Button activities is active).
Items /Items	Flag is active - the resource is created as products
resources /Ressouce	Flag is active - the resource has been created as a resource
Resource Group /Ressoucegroup	Flag is active - the resource is created as a resource group
Test instrument /test instrument	Flag is active - the resource is created as a test instrument.
Internal Release Status / internal release status	
External release status / external release status	
Final use /Last usage	Date of last use of the equipment.
Resources in external use / Tool is used external	You see at a glance immediately whether the resource is in a customer or supplier in use.
Account number / Customer account	This shows in which customers the resource is currently.

©2018 Avanade Inc. All Right Reserved.

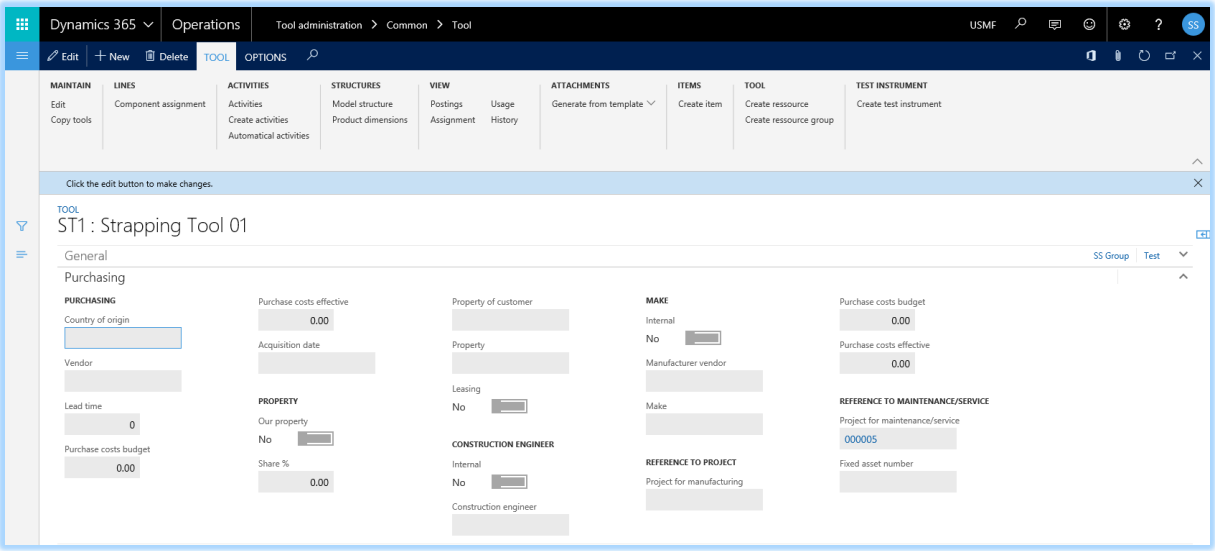
Register Detail - Tool



Information Register General / general	description
Resource number /tool number	The equipment number can be assigned manually or is embarrassed by a number range. Double counting is not possible here.
Positions active /position active	If the indicator is set, and resource positions can be detected to resources.
Designation / Surname Designation 2 /name 2	The label fields are free writable.
Serial number /Serial number	(only information) The serial number of the equipment can be added (only information - no checks on this field).
Resource group /tool group	Used for grouping and evaluation of resources.
Model structure /Model structure	Unique number identifying the associated model structure (see section Complex tooling)
Competent person /Person in charge	Assignment of an employee from the employee master
Location /Site	The resources can be assigned to a location (standard dimension).
Warehouse /Warehouse	Allocation of the storage location in which the equipment is mounted (standard dimension).
Storage space - 1 /Location 1 Storage space - 2 /Location 2	Information of the exact storage location (User definable) Information of the exact storage location (User definable)
Total weight /Overall weight	Weight is indicated by the resource
Unit /Unit	The unit in which the resource is defined and stored.
Gross Depth /Great depth Gross width /Gross width Gross height /Gross height Unit /Unit	Specifying the resource-mass (incl. Unit size tolerances)

avanade
©2018 Avanade Inc. All Right Reserved.

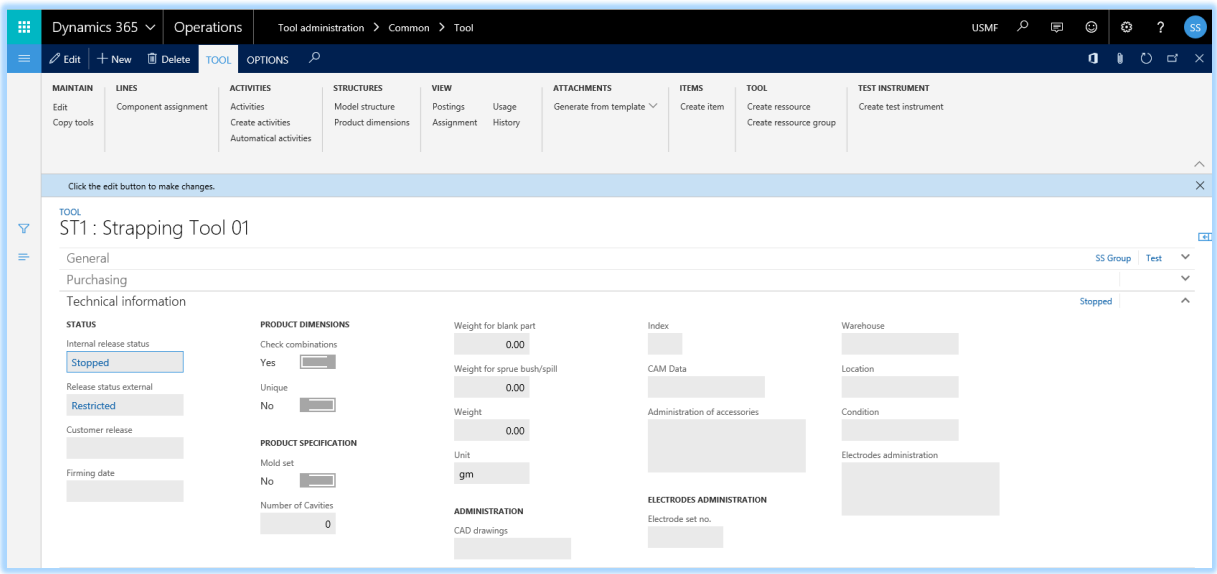
Activities active / activites active	If Yes - Activities will be used for this resource
Planned hours / Schedule time	Planned expenditure in hours
Open hours / Outstanding time	Still open hours - open effort
System (all fields) Creation date and time /Created date and time Created by / Created by Modification date and time / Modified date and time Changed by / Modified by	Specifying the date, time and staff creating



Information Register Procurement / Purchasing	Statement
Country of origin /Country of origin	Manufacturer country or country of origin of Delivery
vendor /Vendor	Vendor (from the vendor master), which provides the resources.
Delivery time /lead time	Time (in days) required for the replacement.
Cost Budget / Purchase costs budget Cost Realized / Purchase costs effective	self explanatory
Date of purchase /Acquisition date	self explanatory

©2018 Avanade Inc. All Right Reserved.

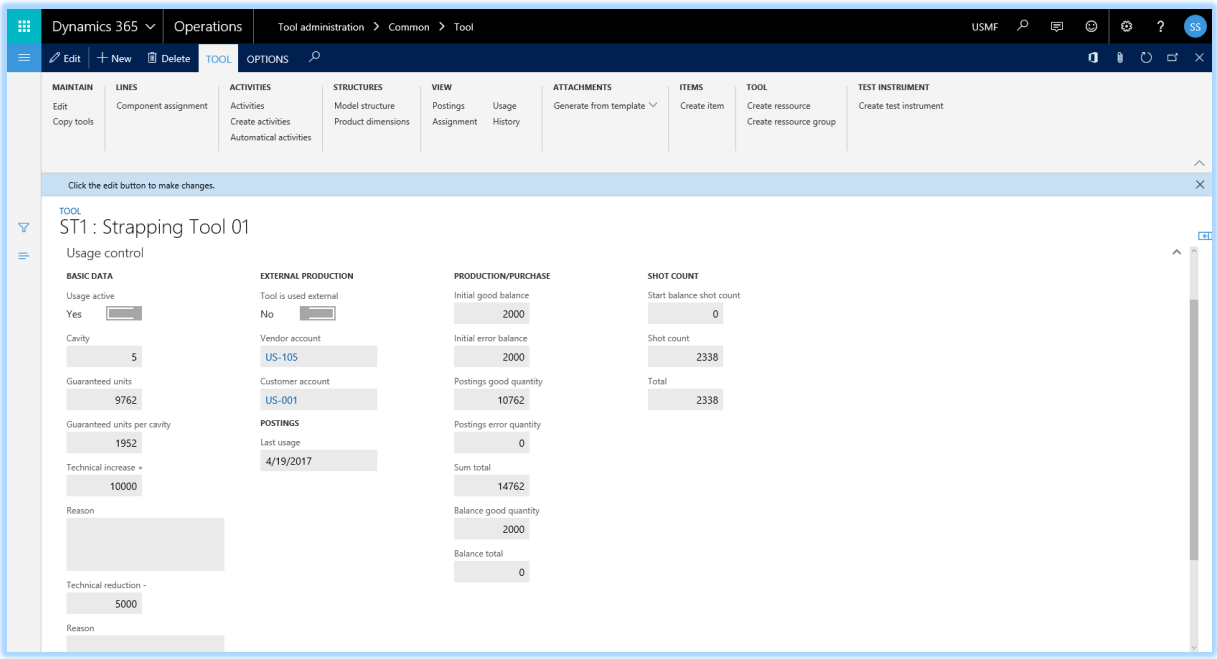
Our property / our property Proportion of% /Share% Property Customer /Property of customer property /Property Leasing /leasing	Specifies the ownership of resources. In the field "property debtor", a customer will be selected from the customer master.
Internal /Internal Constructor /Construction engineer Internal /Internal Manufacturer Vendor /Manufacturer vendor Manufacturer /Make	You can store information on the designer and manufacturer. In the fields and constructor "Manufacturer Vendor" can be selected vendor from the vendor master.
Project Preparation /Project for manufacturing	Reference to Microsoft Dynamics 365 for operations projects that are created for production, maintenance and service.
Cost Budget / Purchase cost budget	
Cost Realized / Purchase cost effectiveness	
Project Maintenance / Service /Project for maintainance service	
Plant number /Fixed asset number	Optional - This is where the resources can be associated with the asset number of the asset accounting.



©2018 Avanade Inc. All Right Reserved.

Information Register Technical / Technical information	Description
Release Status internal /Internal release status	Selection of the internal status for the operating means. The status selection can be predefined in the settings for resource management. Pro productions can define which release status to be checked.
Release status External /External release status	Selection of the external status of the resources. The status selection can be predefined in the settings for resource management. Pro productions can define which release status to be checked.
Sharing customer /Customer release	It can be selected from the customer master data of the customer who is responsible for the release.
Release Date /Firming date	Release Date (can optionally be used for internal or external release).
Check combinations /Check Combinations	Specification whether a test release Product Dimensions combination is to be performed for the resource
Unique /Unique	Only an active combination of product dimension combinations is permitted
~~set tool~~	~~Combination of disparate products from this tool.~~
~~number~~ ~~Weight per disc~~ ~~Weight sprue / overflow~~ ~~Weight, unit~~	~~Injection molding tools: There are formed sums of the number and weight of the blanks produced. "Weight per disc" is the average weight of the blanks.~~
Drawing CAD /CAD drawings Index /index CAM data / CAM Data Management Accessories /Administration of accessories	Multiline Text Field to free information to manage.
Electrode set no. /Electrode Set number Warehouse /Warehouse Bin /Location State /conidition Electrodes Administrative /Electrodes administration	Injection molds: Information electrode administration. The state selection can be predefined in the settings for resource management.

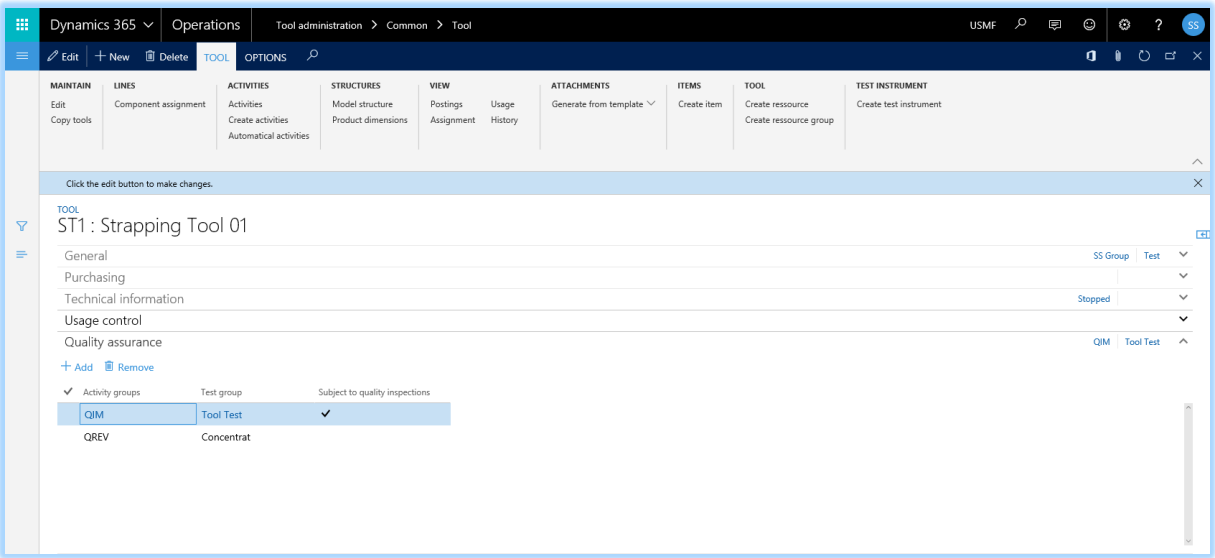
©2018 Avanade Inc. All Right Reserved.



Information Register Performance assessment /Usage control	Description
Performance monitoring active / Usage active	Flag Yes - all bookings will be considered and recorded.
Cavity /cavity	Number of simultaneously resulting products per tool / Hub
Guaranteed units /Guaranteed units	The manufacturer guaranteed units
Guaranteed units proKavität /Guaranteed units per cavity	calculated field Guaranteed units per well = Guaranteed units / well
Increase technical +, base /Technical increase +, Reason	Technically unavoidable correction of guaranteed units
Reduction technology - basic /Technical increase -, Reason	Technically unavoidable correction of guaranteed units
Net units /Net units	calculated field Net units = Guaranteed units + increase - reduction
Resource is used externally, accounts payable /Tools is used external	Resources can be managed, if it is made a suppliers. The usage assessment then based on the quantities delivered to the associated orders.
Final use / Last usage	Date of last use of the resource (information)
Start balance Good /Initial good balance	Display of the current usage of the equipment. The sums resulting from the usage-related bookings during production and purchasing processes. Good amount - Is the equipment in a used condition can here already the starting balance to be set manually.
Start Balance Committee /Initial error balance	Committee Volume - Is the equipment in a used condition can here already the starting balance to be set manually.
Reservations Good /Postings good quantity	All Well-amounts from the journal entries (production orders, purchase orders, sales orders) are summed up here.

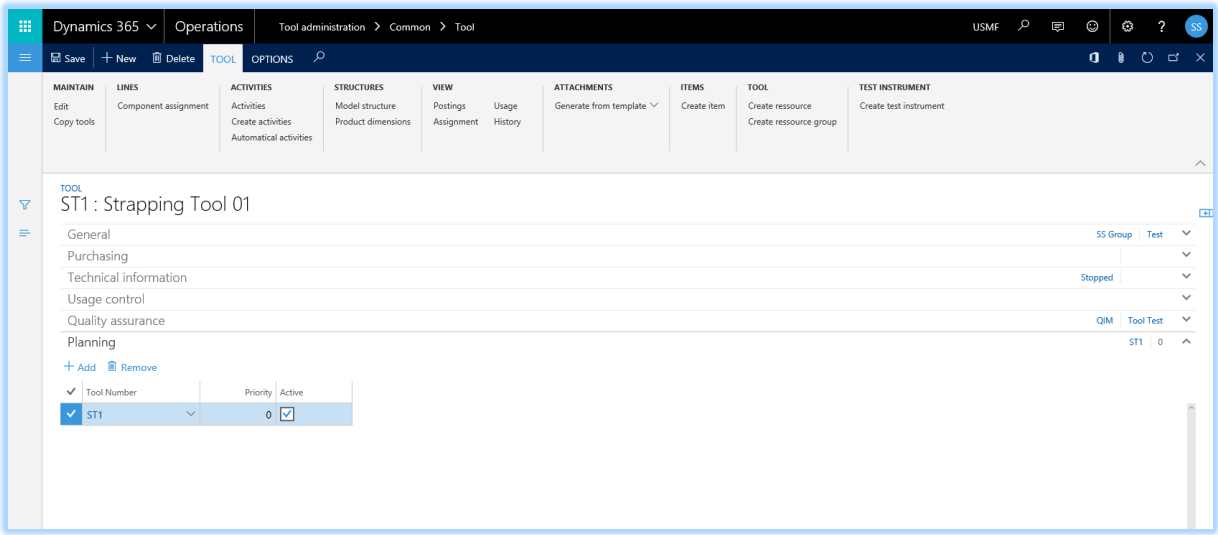
©2018 Avanade Inc. All Right Reserved.

Bookings Committee /Postings error quantity	All committee sets out the journal entries (production orders, purchase orders) are summed up here.
Total sum /Sum total	The sum of all bookings will be displayed here.
Balance Yield /Balance good quantity	
Balance Total / balance total	
Start balance number of shots /Start balance shot count	
Number of shots / shot count	
Total / Total	
Resource is used externally /Tools is used external	Resources can be managed, if they are provided a supplier available, or at a customer in use. The usage assessment then based on the quantities delivered to the corresponding purchase orders or delivery to the customer. Tools Text indicated can only articles and therefore no operations are allocated. With receipt of goods or the delivery of the article, the quantity received is posted as a resource reservation.
Vendor account /Vendor account	Supplier, wherein the operating agent is used.
Customer account /Customer account	Customer in which the resource is used.



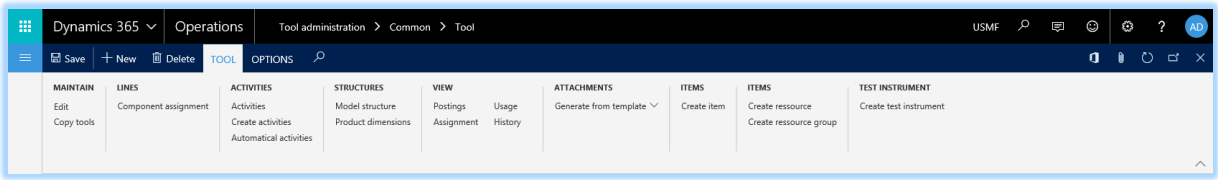
Information Register Quality Assurance /Quality assurance	**description**
Activity Group /Activity groups	Group of activities for which a quality inspection order to be used.
Test Group /test group	Test specification for this equipment and this activity group
subject to quality inspection /Subject to quality inspections	Specifies whether necessarily a quality audit engagement must be used for activities of this group.

©2018 Avanade Inc. All Right Reserved.



Information register Planning /Planning	Description
Resource number /tool Number	Select here that resource which is used when the main resource is not available.
priority / Priority	Enter here the priority in the selection of the equipment on.
active /Active	Utilities Active Yes / No

2.1.1.1 Function buttons



Function button	Description
To edit /Edit	An existing resources can be edited here.
Erase /Delete	Once booking Technically dependent object can be located in the system a resource can not be deleted (historical data).
resources Copy /Copy Tools	Position to be copied to a resource from which the data. All data is transferred 1: 1, additional can be selected whether the positions are to be copied and whether the usage data to be adjusted.
Equipment New /tool (New)	When creating a resource are a few mandatory fields to fill (resource number resource group release status Internal / External).
Positions	

©2018 Avanade Inc. All Right Reserved.

assignment /assignment Component	If a resource flag "positions active" is set, corresponding resource locations can be assigned to this function.
Activities /Activities	Here activities can be defined to resources. Activities are described in detail in chapter "Activity Management. **Activities /Activities** -> All activities for the selected resources are displayed and can be edited there also. **Create Activities /Create acitivies** -> Dialog for creating activities opens. **Automatic Activities /automatical activities** -> Dialog for creating automatic activity opens.
Model Structure Tree / Model structure	Indicates that resources with its operational center positions in a tree view. Is the resource a model structure assigned, this can also be displayed. The model structure is described in the "outline" in detail.
Show /View	Allows visits to the reservations made to the resource, as well as an overview of the assignment (to articles / operations) of the equipment and its use (in production orders). **Reservations / postings -**Here all bookings and journals to resources can be accessed. **assignment / Assignment -assignment** - Are> which production orders, products, and routings associated bookings. **Use / Usage -Cross-reference**-> Where the resource was used (production orders, activities, operations, cost centers, resources, product numbers). With the limitations that the order proposals are to be involved in the selection **history / history -Resources History** -> All bookings of manufacturing orders and activity bookings
Attachments /attachments	Here documents, certificates, files and images can be stored for documentation.
To write an article /Create item	Here, the resource can be created as a product (call Create dialog items).
Create resource /Create resource	Here, the resource can be created as a resource (call dialog resource).
Creating resource group /Create Ressouce group	Here, the resource can be created as a resource group (call dialog resource groups).
Create Test Instrument /Create test instrument	This feature allows a resource can be applied as a test instrument (call dialog Test Instruments).

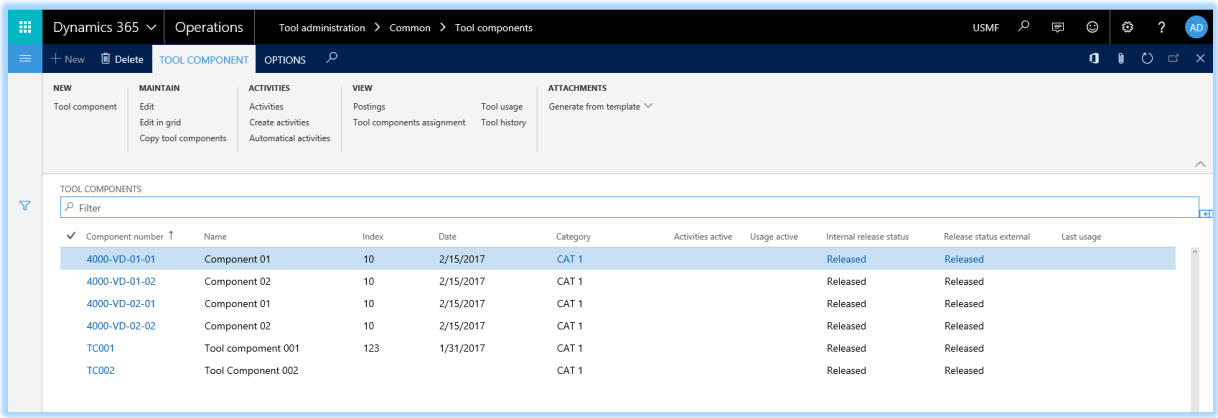
2.1.2 Resources Positions / tool components

In addition to the main tool master a separate master data record is created for each tool component, which is similar to the overall tool general information, procurement information, technical information and usage control data includes. So parts of a tool such as slide, die, mold cavity and bending dies, etc. a total tool can be mapped.

©2018 Avanade Inc. All Right Reserved.

The information and functionality between the resources and resource positions differ in some areas. An overview to them in the chapter "Integration overview resources and working capital positions"

➢ ***Call: / Tool Administration> Common> Tool components***



By using the filter criteria in the upper part of the screen form the resources positions can be selected for the view that meet the specified criteria.

The button functions can be a convenient copy function are selected for working capital positions. It usage information is considered optional.

The button Probe enables the display of postings and the use of resources position.

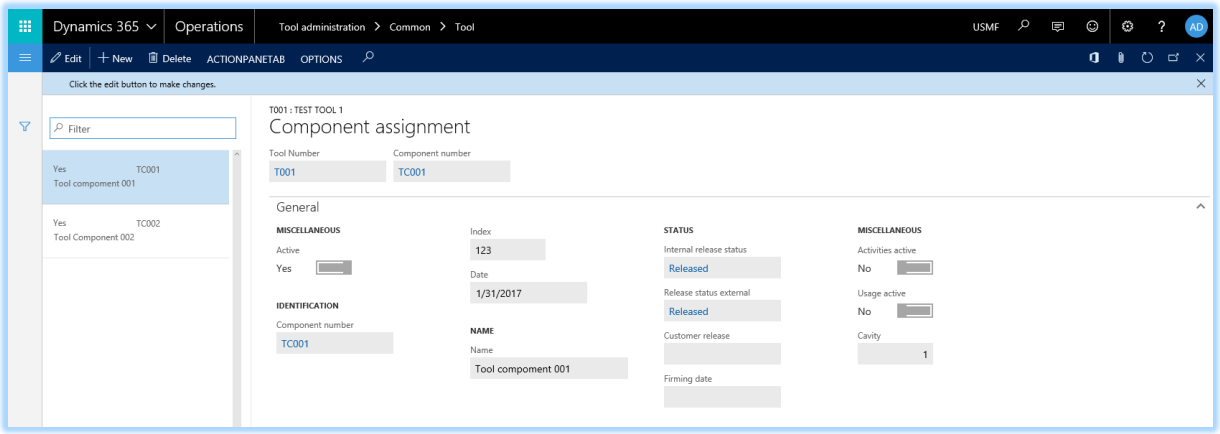
Information resources positions /tool components	**Statement**
Activity due /Activities due	Indicates if an activity for resource position is due. The parameters, the behavior of the system are defined when due or overdue activities (example screen message).
Position number /Component number	Unique number of the resource position
Index /index	Possible indexation
date /Date	Signing Date position
Designation /Surname	Identification of resource position
Category (position) / Category	Categories are used to group, filter and sort of screen displays and printouts.
Activities active /Activies active	If the flag is set, activities can be associated with the resource position (button activity is active).
Performance active / Usage active	If the flag is set, the usage of the operating center position are calculated and recorded.
Release Status internal /Internal release status	Information about the current status of the resource position (eg released by QS is carried out)
Release status External /External release status	Information about the current status of the resource position (eg approval by the customer is carried out)
Final use /Last usage	Date of last use of the resource position.

The General tab, procurement, technical and usage monitoring contain identical information as the resource itself. Exceptions are the product specifications in the register Technically, which are maintained on operating midplane. Notes on the individual fields are located under Paragraph 2.1.1 it behaves with the function buttons as well.

©2018 Avanade Inc. All Right Reserved.

2.1.3 Assignment of resources to resources positions /Assignment tool components to a tool

About the function position assignment on the equipment, the equipment items can be assigned to the appropriate resources. Again, a jump to the reservations is possible.



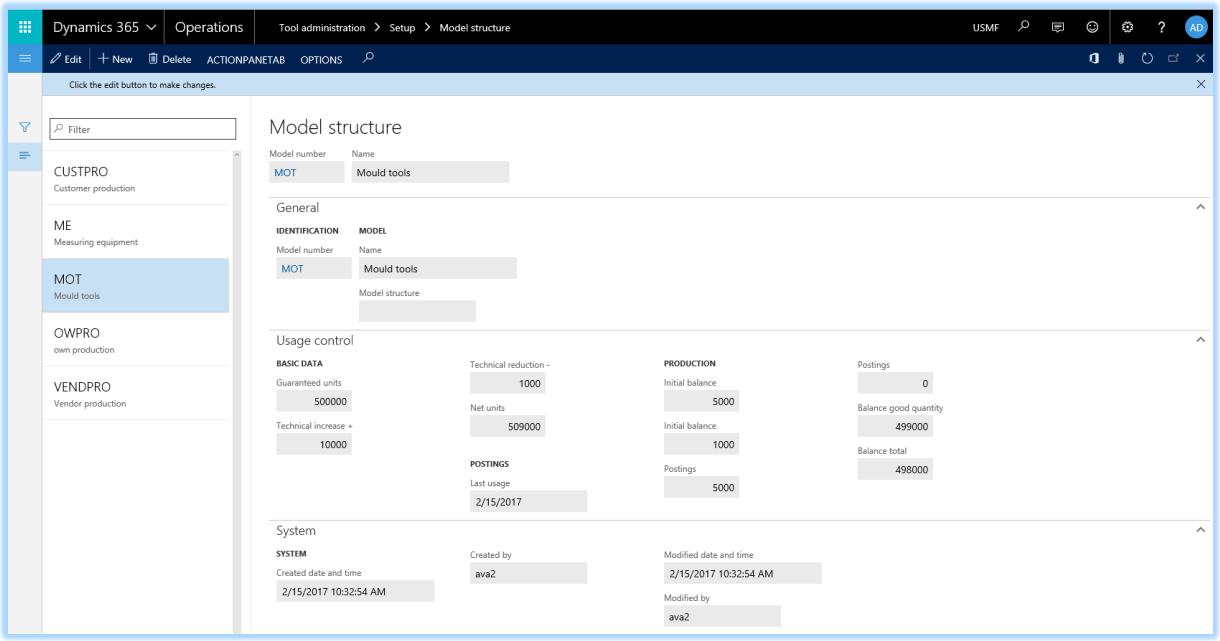
Information resources position assignment	Statement
active /active	Indicates whether this association is active.
Position number /Component number Index /index date /Date Designation /Surname Category /Category	The information is taken from the master data of the resource positions (notes qv)

2.1.4 Model structure /Model structure

The model structure makes it possible to create a user-defined structure superior over the requisite resources. So-called models are defined.

- ***Call: / Tool Administration> Setup> Model structure***

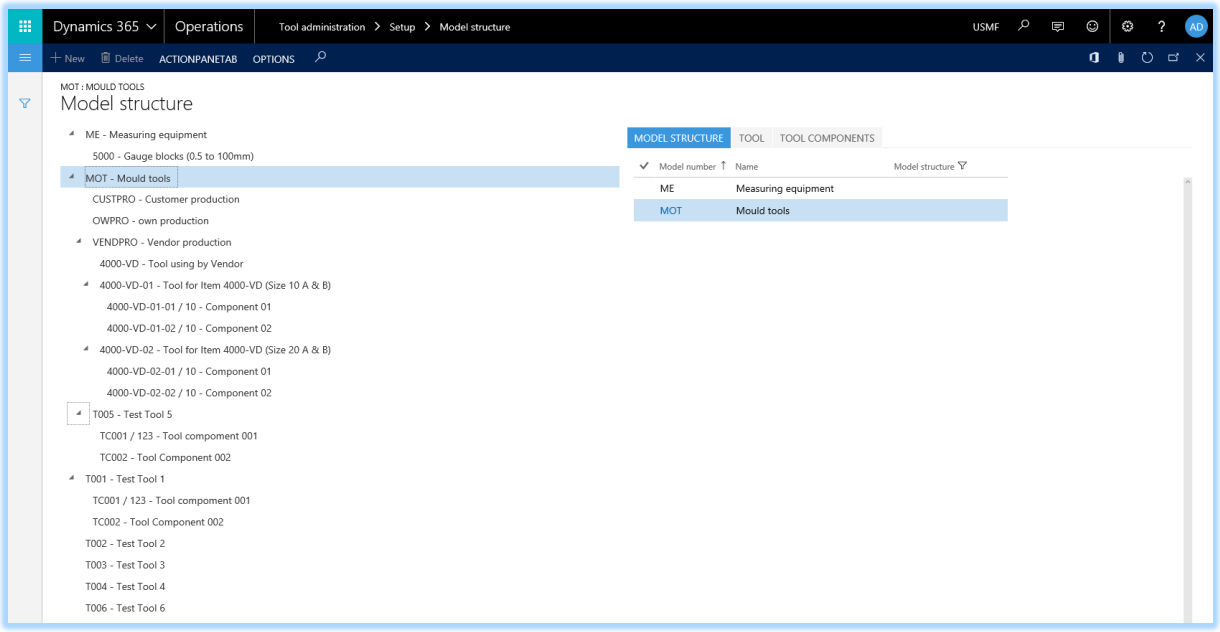
©2018 Avanade Inc. All Right Reserved.



Information model structure /Model structure	Describtion
Model Number /Model number	Unique number or name of the model
Designation /Surname	Identification of the model
Model structure /Model Structure	Here the parent model can be entered and thus a model structure are constructed.
Remaining fields (usage control data) / Usage controldata	The usage control data are no fields, they are calculated by the postings on the resources that are assigned at any stage in the model structure and represented in a compact in the hierarchy.

The button model structure tree, a structure may be called representation. Here, the model structure is displayed with the associated resources and the associated resource positions. It is also possible from this position further resources and / or equipment positions detected. Double-click on the resource or resource location can be jumped directly into the position window.

©2018 Avanade Inc. All Right Reserved.

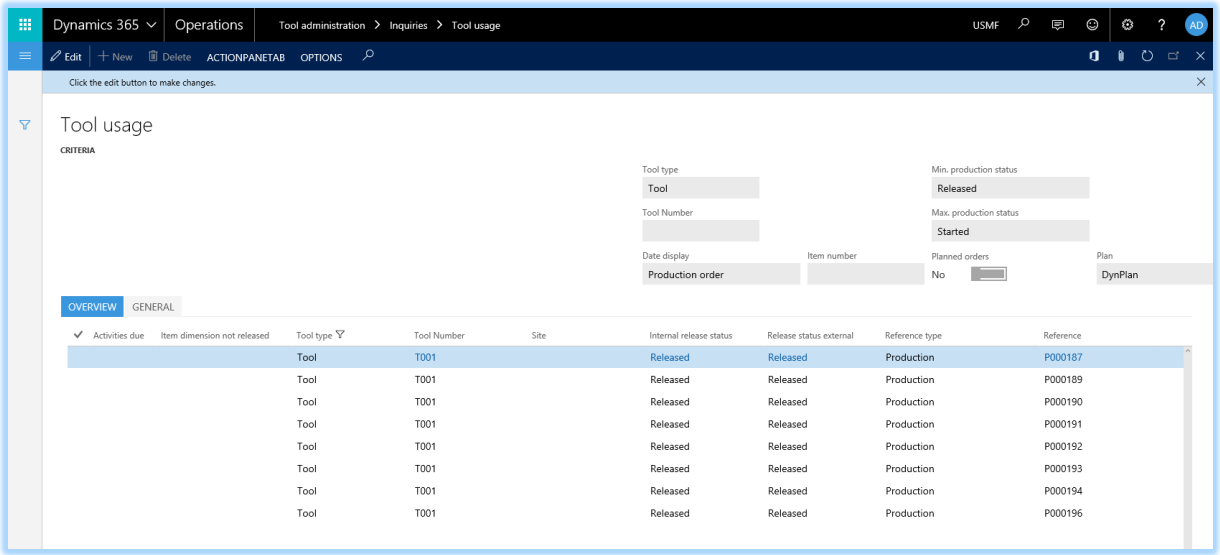


If a tool is structured into its individual components, as are usage control, reference and activity monitoring possible both on the overall tool as well as on the individual components.

2.1.5 Cross-reference /tool Usage

The reference shows the use of a resource or a resource position in manufacturing orders and production operations. Furthermore, automatically establishes a use according to productions on the production order.

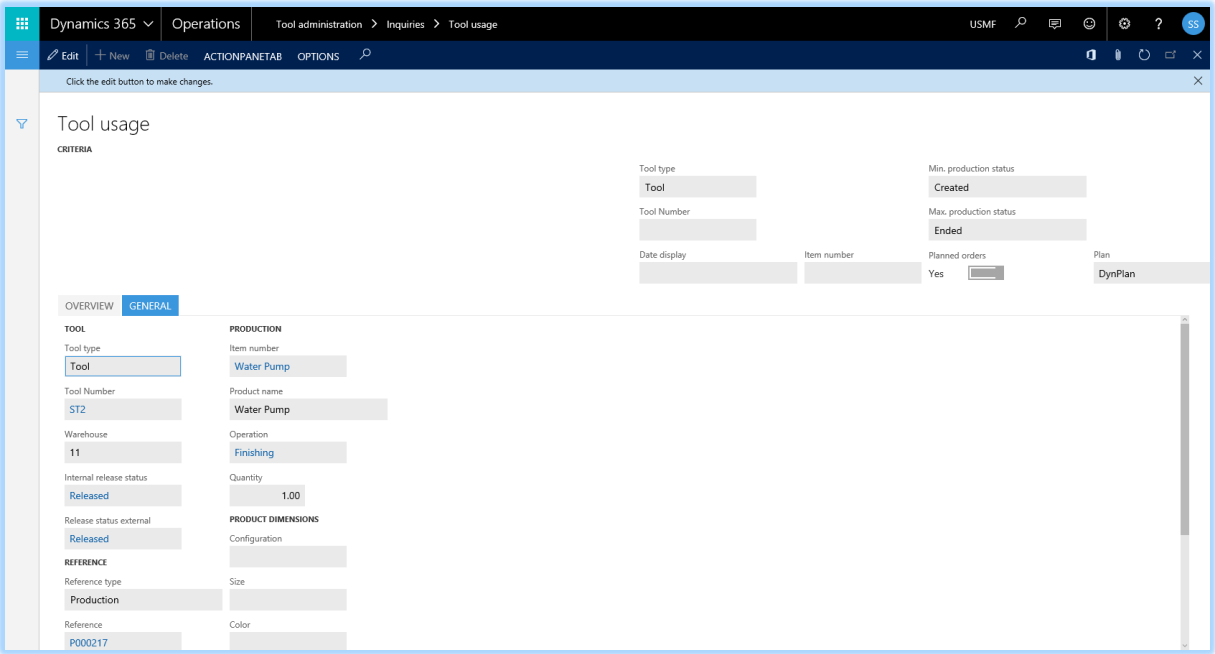
- ***Call: / Tool Administration> Inquiries> Tool usage***



©2018 Avanade Inc. All Right Reserved.

Filter criteria /filter criteria	Statement
Equipment type /tool type	Choice of equipment and working capital position
Resource number /tool number	Selection to display only a resource number.
resource / resource	Displays only uses on a resource. By ticking the flag "lock" is active, this filter.
Item number / Item	Displays only uses for an item. By ticking the flag "lock" is active, this filter.
Min. Production Status /Min. Production status	Displays only uses in productions that have at least the specified production status
Max. Production status /Max production status	Displays only uses in productions that have at most the specified production status
Order proposals /Planned orders	By ticking this flag also uses in only planned productions are shown.
plan /plan	What master planning should be included in the selection

Information Use BM Register Overview	statement
activity /Activities	Indicates that an activity is associated
Reference Type /Reference type	Shows to which reference type is
reference /Order Reference	Shows the number of reference (here no. Of the production order) to
Amount /Quantity	Selection from the master data of the resource positions
Index /index Designation /Surname Category /Categorie Performance active /Usage control active Activities active /Activities active	Detailed information of the resource positions; these fields are displayed in the master data for information but can not be edited here.



©2018 Avanade Inc. All Right Reserved.

Information Use BM General tab /general	Statement
Equipment type /tool type	Indicates whether this is a resource or a resource position
Resource number /tool number	Unique identifier of the resource / resources position
Reference Type /Order referenceType	self explanatory
reference /Reference	Shows the number of reference (here no. Of the production order) to
Activity due /Aktivities due	Indicates whether an activity is due
Open hours /Outstanding time	Shows the number of planned hours for the activity to
Product dimension not released /Item dimension not released	Article not released dimension
Description /Variant Index /index Colour /Color	Displays the product dimension, are produced for the intended
Item number /Item	Item number, referred to by the use
Operation /surgery	Number of operation, referred to by the use
Amount /Quantity	Scheduled production quantity

Function Button /Function button	Statement
Schedule Change /change plan	If planned productions should also be involved, the production program schedule can be defined here, from which the planned productions.
Update mask /Refresh	Build the mask based on the current information on new
Activities /acitvities	Allows the jump in the activity (s)
Article Dimensions /Item dimension	Controls which product dimensions to be displayed.

2.1.6 Bookings for equipment and working capital positions / Postings tools and tool components

The usage control enables monitoring of parts produced with the tool. The usage can be set for the total tool as well as for individual components (eg cavity).

The feedback of the usage comes directly from the Ready message production. The parameter can be set whether the usage control from the feedback of the parts produced, or from the time confirmation is read. If a complete production including tool manufactured externally, the usage control of the goods receipt in purchase is registered. If a production made by the customer himself again the message can be booked on a delivery to the usage control of the equipment. The corresponding resource is "in used external resources is" as and assigned to a service item. If this service shopped and booked the corresponding input delivery, this amount is recorded as an amount to the resource.

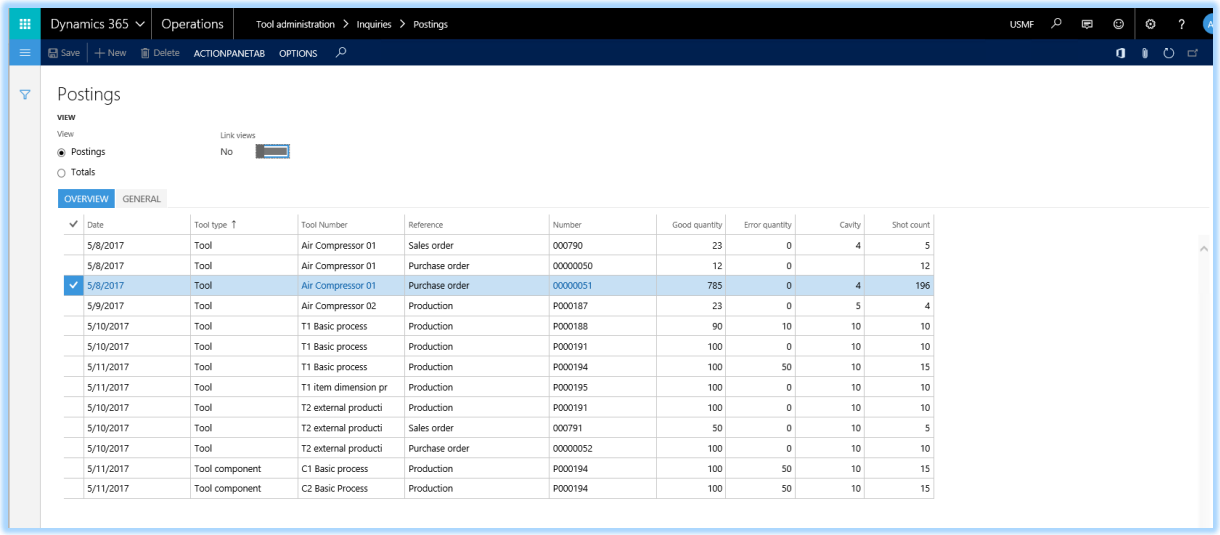
- **vendor /Vendor** -> The update of the amount of the usage control is performed in receiving to the delivery (Prerequisite -> Purchase Order)
- **customer /Customer** -> The update of the amount of the usage control is performed in the goods on the delivery note letters (Prerequisite -> Sales Order)

©2018 Avanade Inc. All Right Reserved.

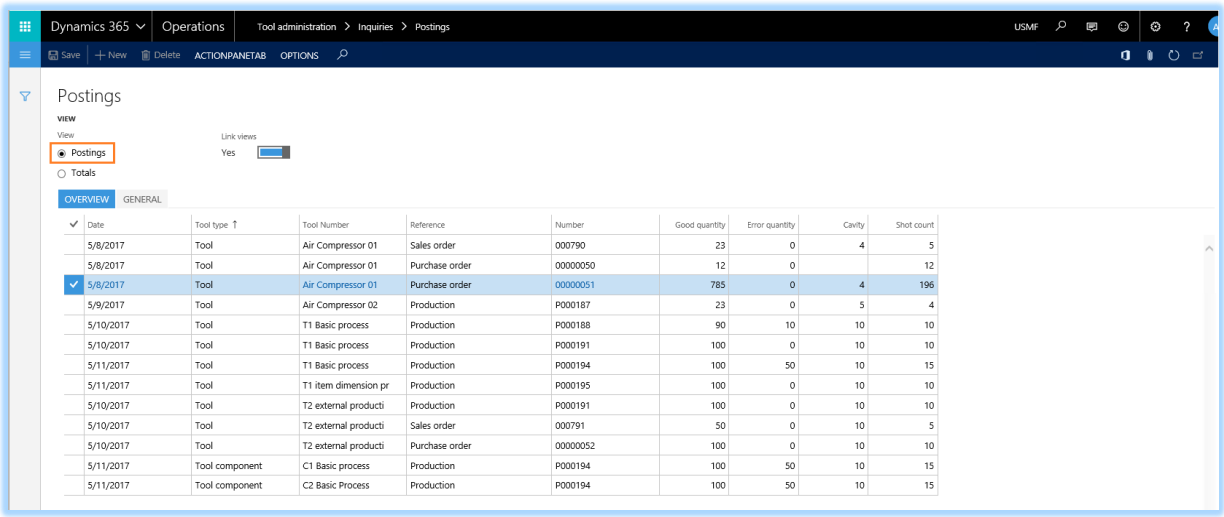
2.1.7 Detailed representation of the postings / postings detail

From the mask of the resource and the resource locations can bookings overview of resources bookings are called with the button query function.

- ***Call: / Tool Administration> Inquiries> Postings***

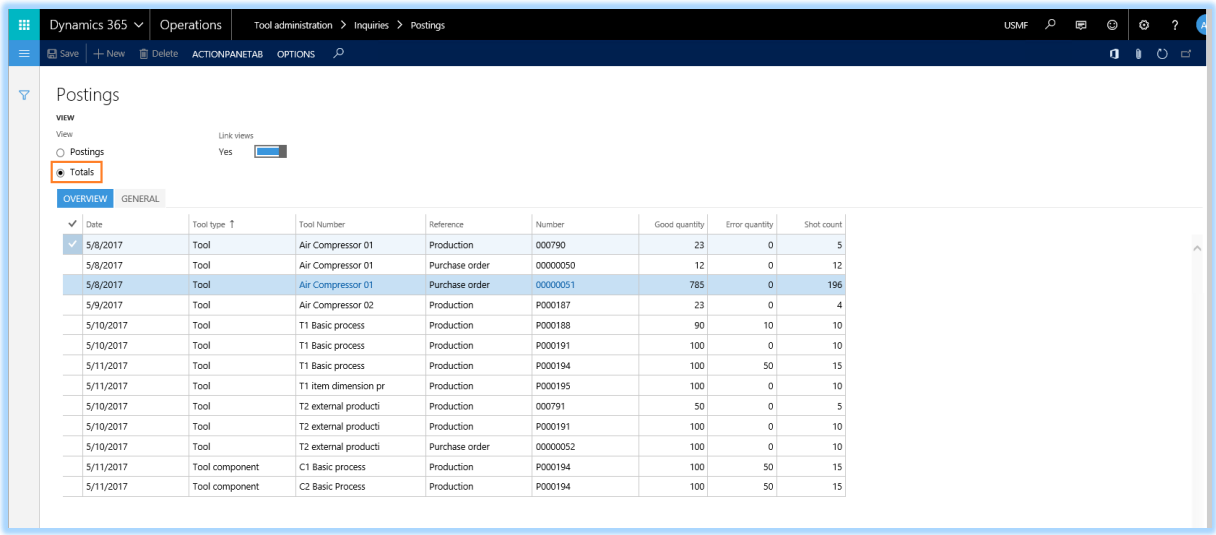


Date	Tool type	Tool Number	Reference	Number	Good quantity	Error quantity	Cavity	Shot count
5/8/2017	Tool	Air Compressor 01	Sales order	000790	23	0	4	5
5/8/2017	Tool	Air Compressor 01	Purchase order	00000050	12	0		12
5/8/2017	Tool	Air Compressor 01	Purchase order	00000051	785	0	4	196
5/9/2017	Tool	Air Compressor 02	Production	P000187	23	0	5	4
5/10/2017	Tool	T1 Basic process	Production	P000188	90	10	10	10
5/10/2017	Tool	T1 Basic process	Production	P000191	100	0	10	10
5/11/2017	Tool	T1 Basic process	Production	P000194	100	50	10	15
5/11/2017	Tool	T1 item dimension pr	Production	P000195	100	0	10	10
5/10/2017	Tool	T2 external producti	Production	P000191	100	0	10	10
5/10/2017	Tool	T2 external producti	Sales order	000791	50	0	10	5
5/10/2017	Tool	T2 external producti	Purchase order	00000052	100	0	10	10
5/11/2017	Tool component	C1 Basic process	Production	P000194	100	50	10	15
5/11/2017	Tool component	C2 Basic Process	Production	P000194	100	50	10	15

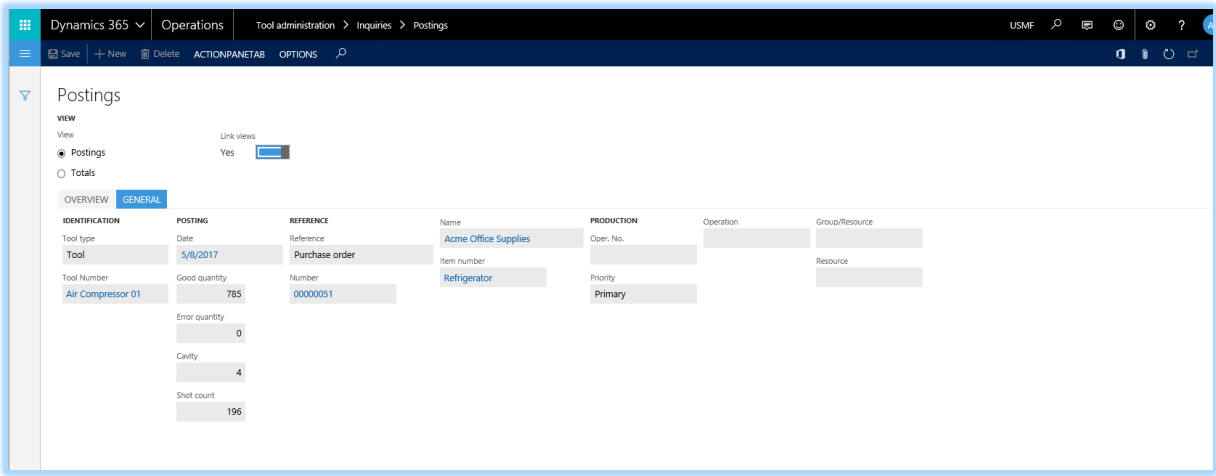


Date	Tool type	Tool Number	Reference	Number	Good quantity	Error quantity	Cavity	Shot count
5/8/2017	Tool	Air Compressor 01	Sales order	000790	23	0	4	5
5/8/2017	Tool	Air Compressor 01	Purchase order	00000050	12	0		12
5/8/2017	Tool	Air Compressor 01	Purchase order	00000051	785	0	4	196
5/9/2017	Tool	Air Compressor 02	Production	P000187	23	0	5	4
5/10/2017	Tool	T1 Basic process	Production	P000188	90	10	10	10
5/10/2017	Tool	T1 Basic process	Production	P000191	100	0	10	10
5/11/2017	Tool	T1 Basic process	Production	P000194	100	50	10	15
5/11/2017	Tool	T1 item dimension pr	Production	P000195	100	0	10	10
5/10/2017	Tool	T2 external producti	Production	P000191	100	0	10	10
5/10/2017	Tool	T2 external producti	Sales order	000791	50	0	10	5
5/10/2017	Tool	T2 external producti	Purchase order	00000052	100	0	10	10
5/11/2017	Tool component	C1 Basic process	Production	P000194	100	50	10	15
5/11/2017	Tool component	C2 Basic Process	Production	P000194	100	50	10	15

©2018 Avanade Inc. All Right Reserved.



Information Bookings Overview tab	Statement
date /Date	Date of booking. the book is performed with the finished message from manufacturing orders or with the confirmation of the operations depending on the setting. For external manufacturing date of the booking may be the receipt date.
Resource number /tool number	Display the resource number
Equipment type /tool type	Indicates whether this is a resource or a resource position
reference /Reference	Indicates from which Microsoft Dynamics 365 for operations module resulting postings. The field is to be considered in conjunction with the numeric keypad.
Number /Order number	Displays the unique number of orders from production or purchase.
Yield /Good quantity	Resulting amount of the feedback on the corresponding order.
Committee Volume / Error quantity	Resulting amount of the feedback on the corresponding order.

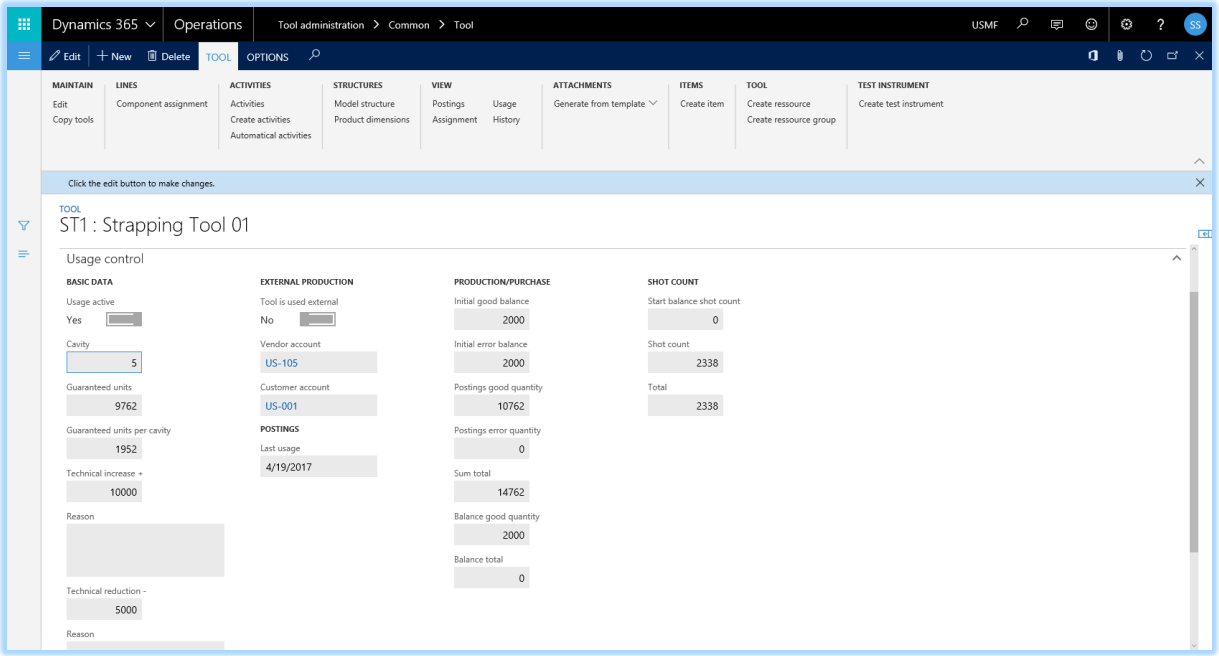


©2018 Avanade Inc. All Right Reserved.

The button book references you get an overview of the related transactions from the production or procurement processes in the Microsoft Dynamics 365 for operations standard modules.

Totals and evaluation of the bookings

On the usage control tab control of the resources they view an overview of the service provided by the equipment.



Information resources, **Register Performance assessment /Usage control**	**statement**
Net units /Net units	Calculated Field /Caluculeted field Net units = Guaranteed units + increase - reduction Net Units = Guaranteed units per cavity + Technical Increases - Technical reduction
Start balance Good /Initial good balance Start Balance Committee /Initial error balance	It can be a starting balance are input, which enters into the calculation of the current balance with.
Reservations Good /Postings good quantity Bookings Committee /Postings error quantity	Sum of the usage-related bookings during production and purchase / sales processes

©2018 Avanade Inc. All Right Reserved.

Balance Total / balance total	Display of the current usage of the equipment. Balance Total = net units - Start balance - Bookings Balance = Net total units - Sum total - Postings

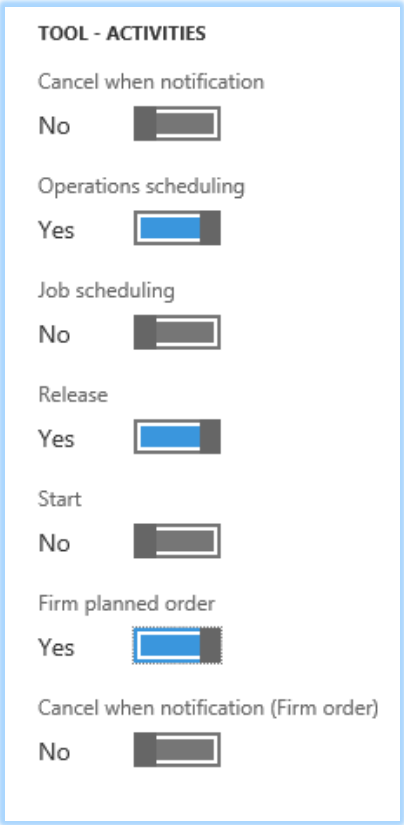
2.2 Activity Management /Activity management

The activity management allows mapping of individual activities (eg, repair, maintenance) to a tool or tool component.

Is a tool associated with an activity, as indicated by symbols in the tool base? Activities can be monitored selectively in corresponding masks with filters. When you schedule production orders a resource position is for a resource / examined whether activities of the respective control equipment / resource position are due in the corresponding period.

The reporting behavior (abort or warning), as well as the time of notification (rough scheduling /operation scheduling, Detailed scheduling /job scheduling, ...), In the parameters of the resource management can be set (see chapter settings and parameters).

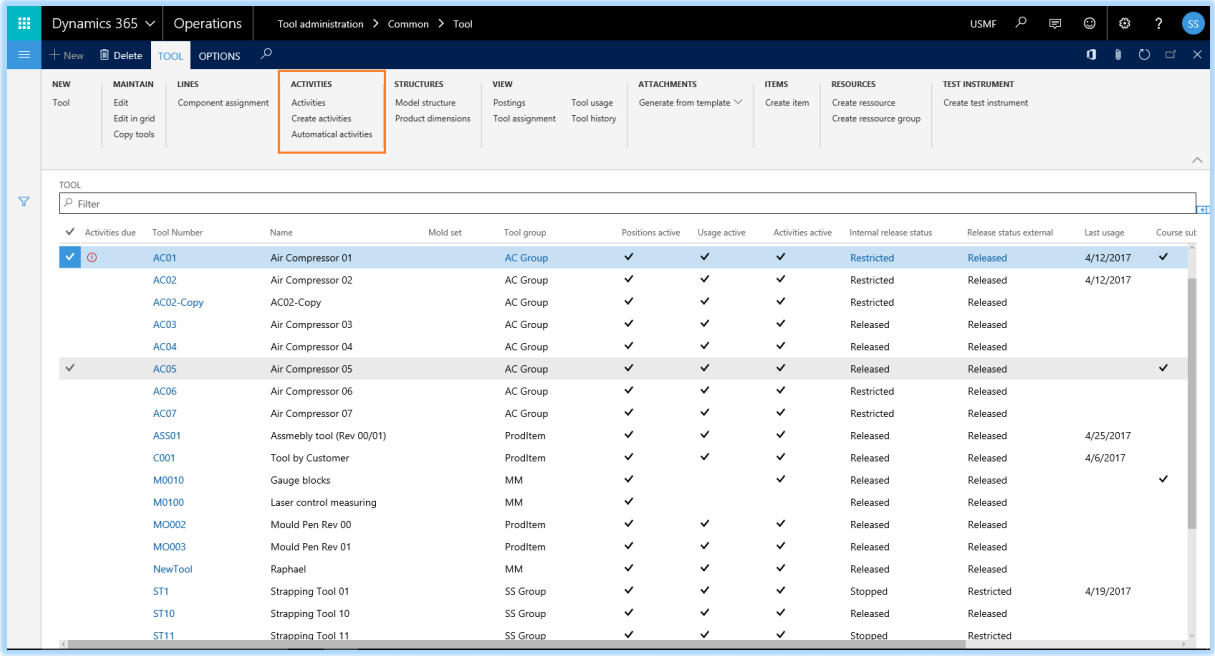
- ***Call: Tool administration> Setup> Parameters (Notification)***



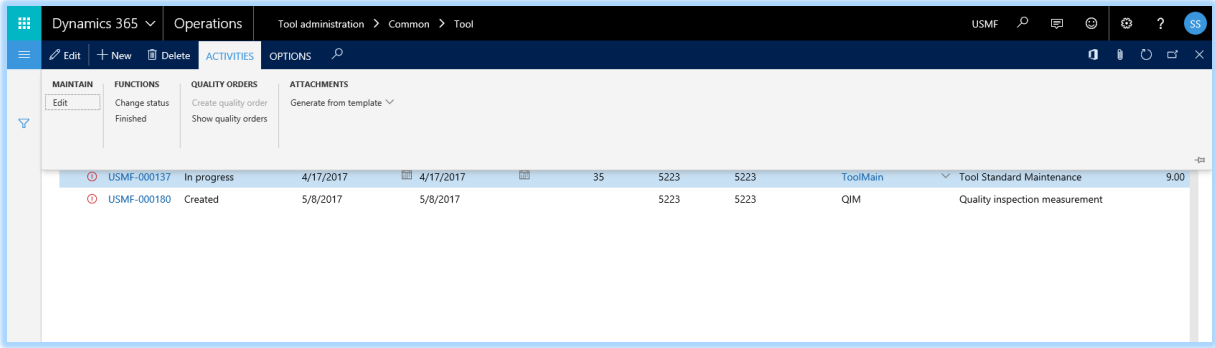
A tool or component can be assigned any number of activities. An activity can be controlled Date (eg maintenance from 7.1.2016 until 07.10.2016) or they may be dependent quantities. (Eg revision to 50000 pieces).

The activities can on the working capital /tool or resource position mask /tool components be called.

©2018 Avanade Inc. All Right Reserved.



The view shows the activities for the selected resources / tool or resource positions /tool components,



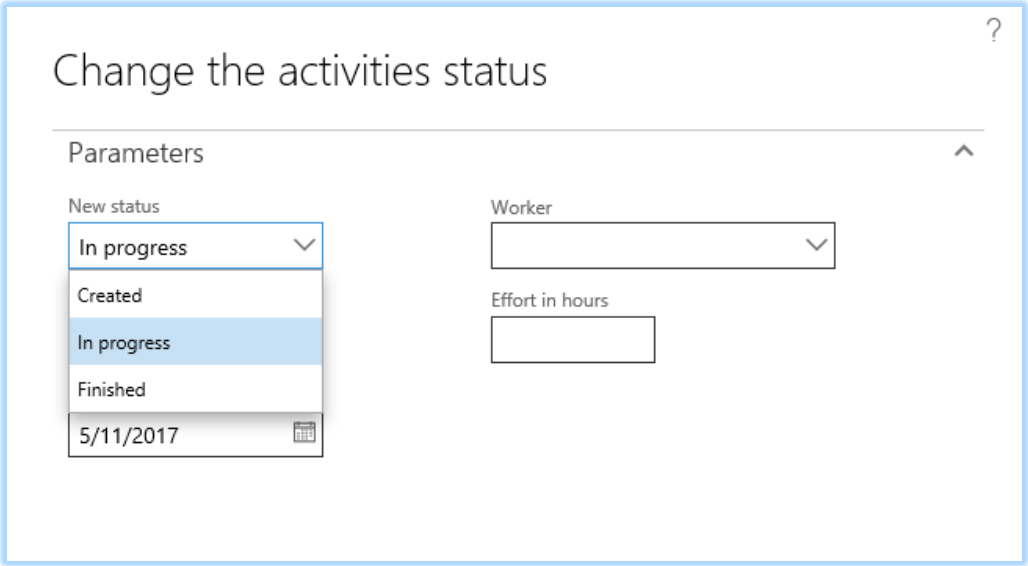
Information activities	Statement
due /Activities due	Icons indicate the due date of an activity to
Activity number /Activity number	Unique identifier of each activity
status /status	With the functions button the status displayed here can be changed. Possible characteristics are: created, in work and done.
Start date, end date /End date	Date fields, mark the start and end of the activity. If the start date is reached, an icon appears in the box Overdue.
Amount /Quantity Current amount /Effective quantity	If the field current amount reaches the value of the field size, the field is Overdue assigned a symbol also. Depending on the parameter settings, the use of resources or the resource position is affected.
Quantity when creating /Creation quantity	Showing the amount of which the activity was created
Amount at settlement /completion quantity	Shows the amount of the activity was done in
activity /activitiy group	Activities can be created as master data that you assign here.

©2018 Avanade Inc. All Right Reserved.

Description /description	Descriptions of activities are taken automatically from the master data.
Planned hours /Scheduled time	Planned duration of the activity
Open hours /Outstanding time	Reported Duration of Activity
Test Group /test group	Test specification for this activity. Required for installation of quality testing contracts.

There is also the possibility of a change in status of the activity.

The following statuses are possible:



2.2.1 Manually Creating Activities /Manual creation of activities

Activities can be created manually for individual resource and / or resource positions are described from inputs or operating center position as described under 2.2.

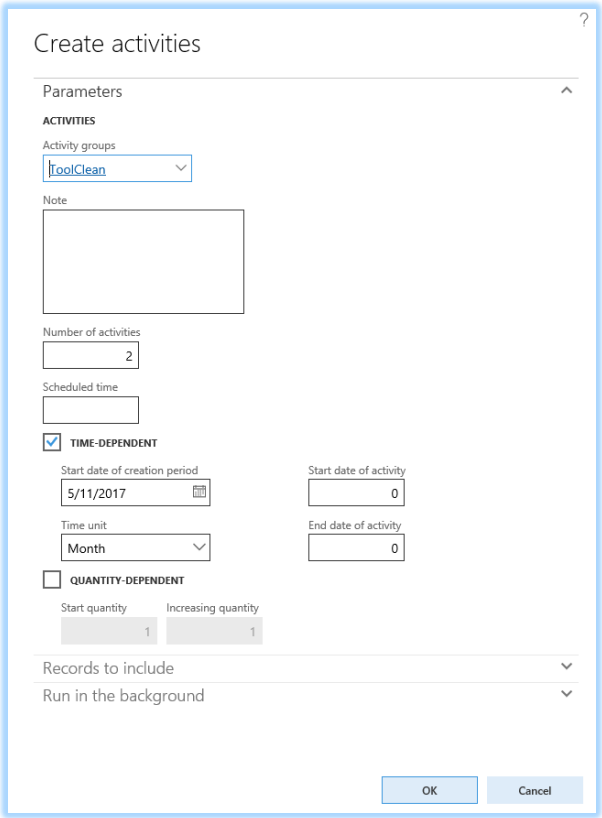
2.2.2 Mass production of activities /Bulk creation of activities

An activity can be created via a ground preparation for a variety of resources:

- ***Call: Tool administration> Periodic> Create activities***

This function also periodic activities can be displayed (for example: all 100 units Check or time-dependent posting date or when ended the activity or has been started).

©2018 Avanade Inc. All Right Reserved.

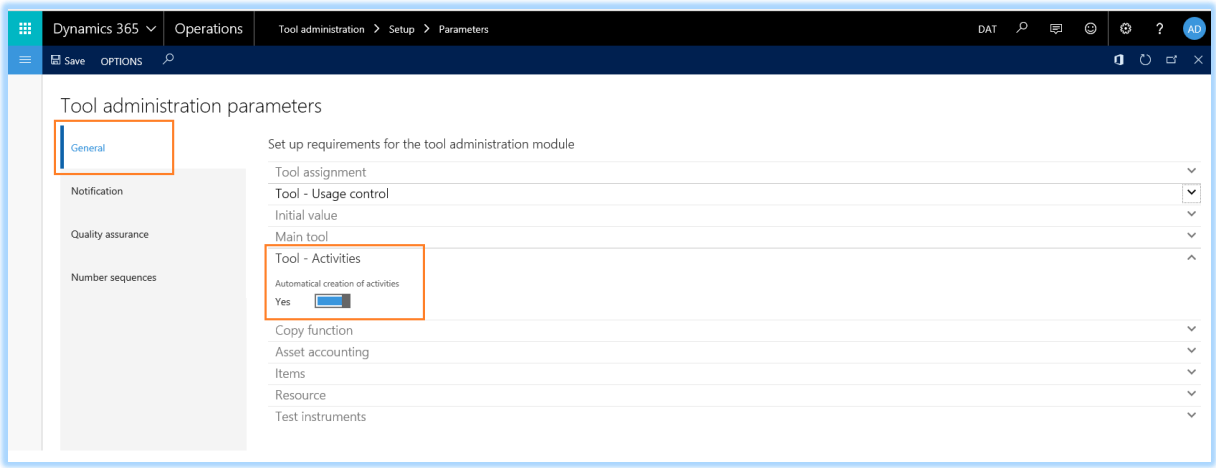


In Field Activity /Activity groups the activity group /Activities are given, for the activities to be created.

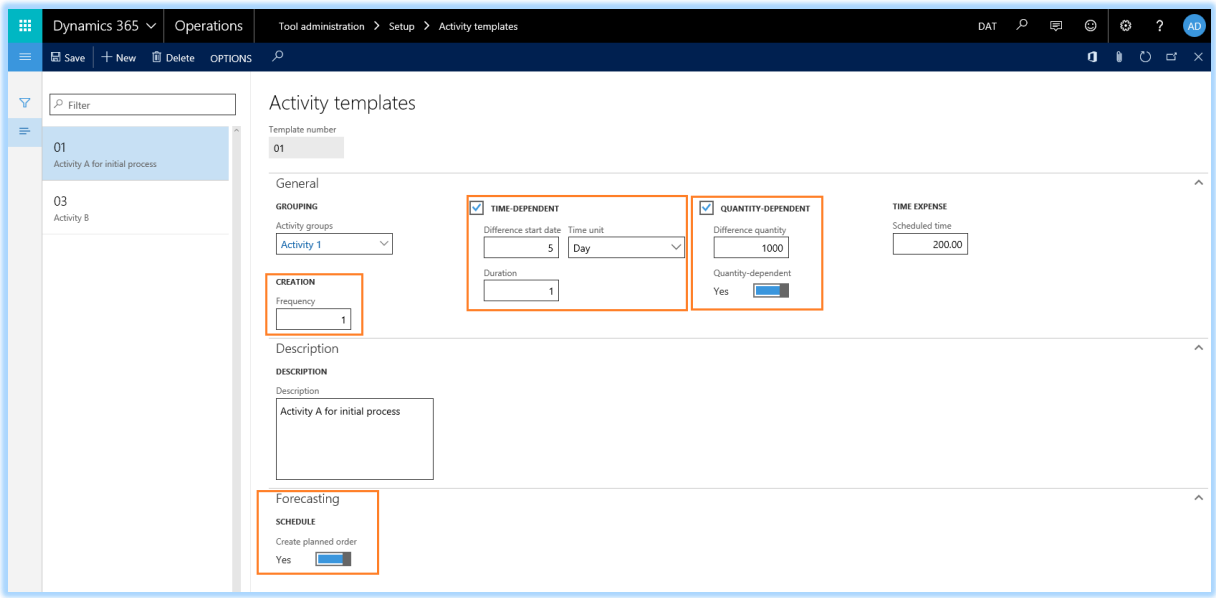
About the "Select" button, the selection will be made, for which resources and / or equipment positions the appropriate activity to be created.

2.2.3 Using automatic Activities /Use automatic activities

Activities can be automatically generated based on production ready messages or operation confirmations. If the production order or the operation is "finished", the activity is triggered. Prerequisite for the use of automatic activities that enable the appropriate flags in the parameters of the resource.



©2018 Avanade Inc. All Right Reserved.



Here is a template on the template number selected and added to the drawing type can be either of pedometers or an interval. These are defined in each of the next fields. Finally, the activity must be activated.

2.2.4 Quality testing contracts for activities /Quality order for activities

Condition - in the parameters of Inventory management, quality management is activated.

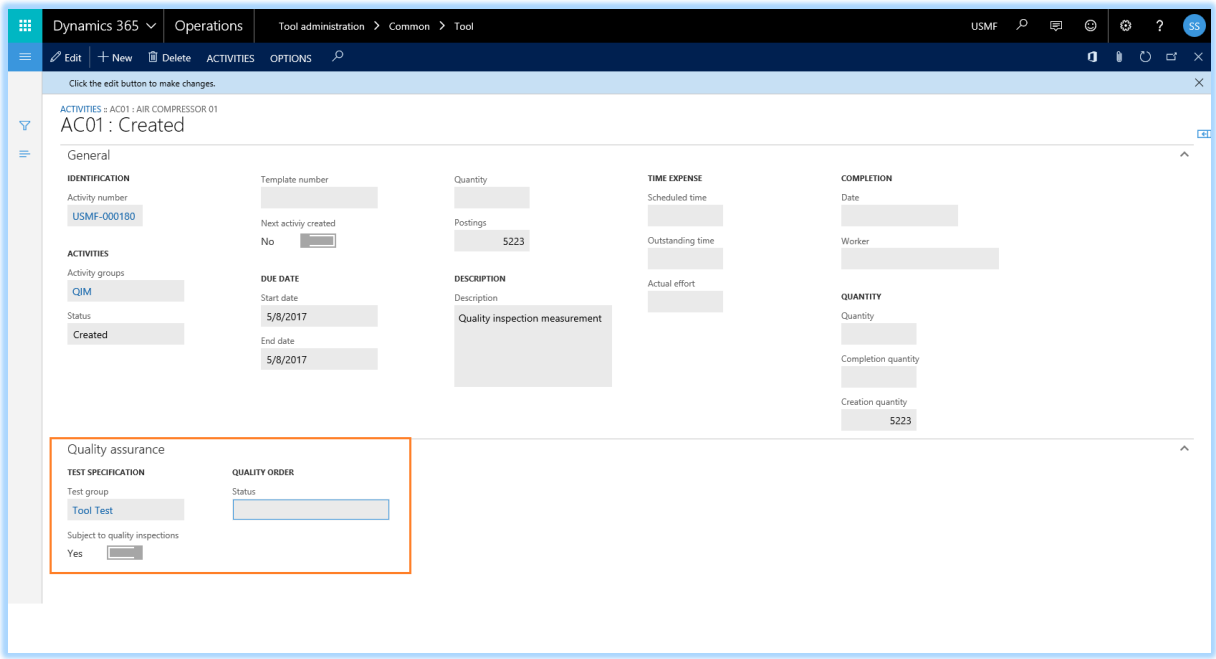
For an activity, a quality order can be generated. For this purpose, a test group must be specified. At level resources can per activity group a test specification (test group) are defined, which is then copied to the activity.

It is possible to create several quality audit assignments for an activity, but only one may simultaneously be open.

If an activity is specified as subject to quality inspection, then it is imperative to create and complete a quality audit contract before the activity can be done.

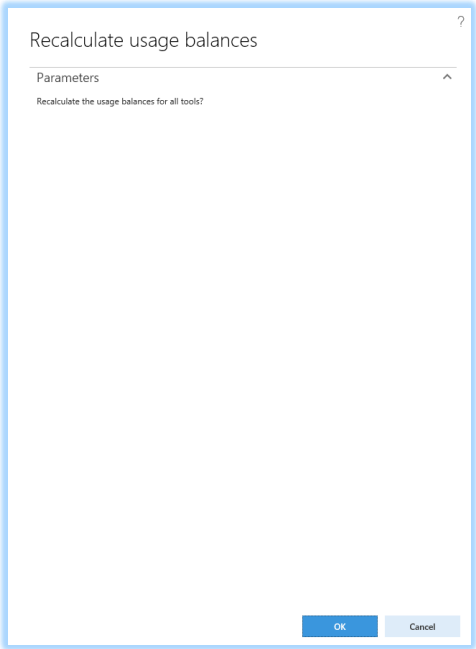
On the quality of audit engagements can be accessed through the activity, on the resources and via the main menu.

©2018 Avanade Inc. All Right Reserved.



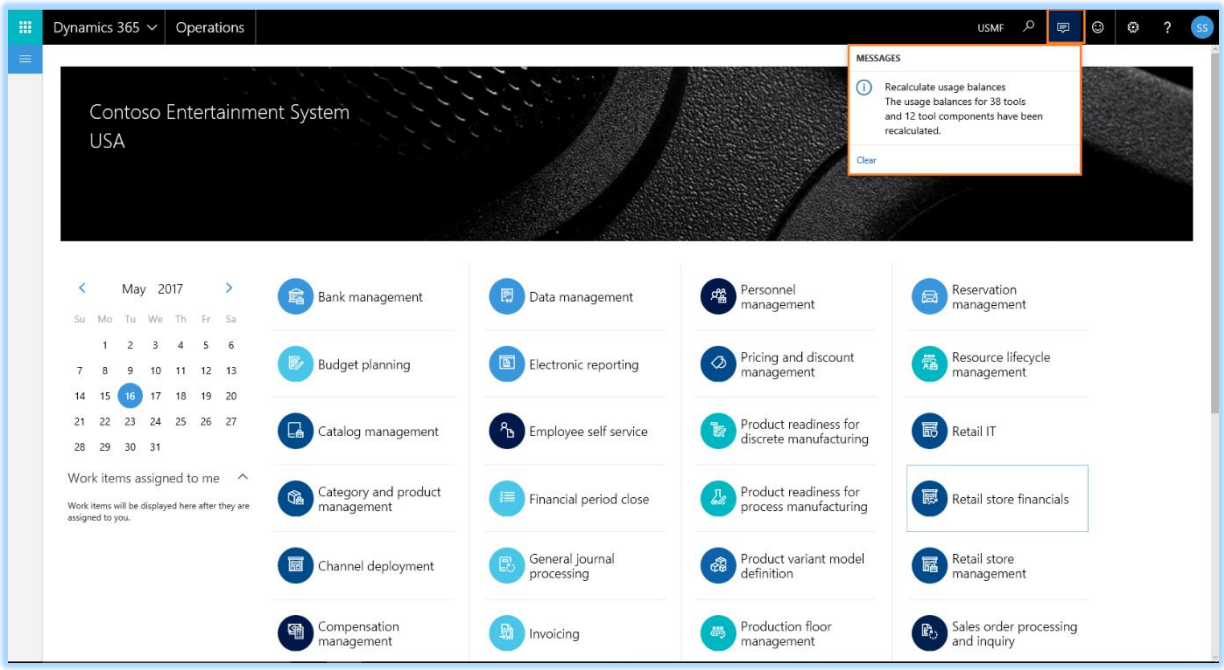
2.3 Performance assessment /Usage control

The transaction / usage balances recalculation makes it possible to monitor the quantities produced with a resource or a resource position. The respective amounts are calculated automatically at the ready message of the production orders or the operations (adjusted) and updated in the resource management.



After executing get his feedback on the evaluated quantity structure.

©2018 Avanade Inc. All Right Reserved.



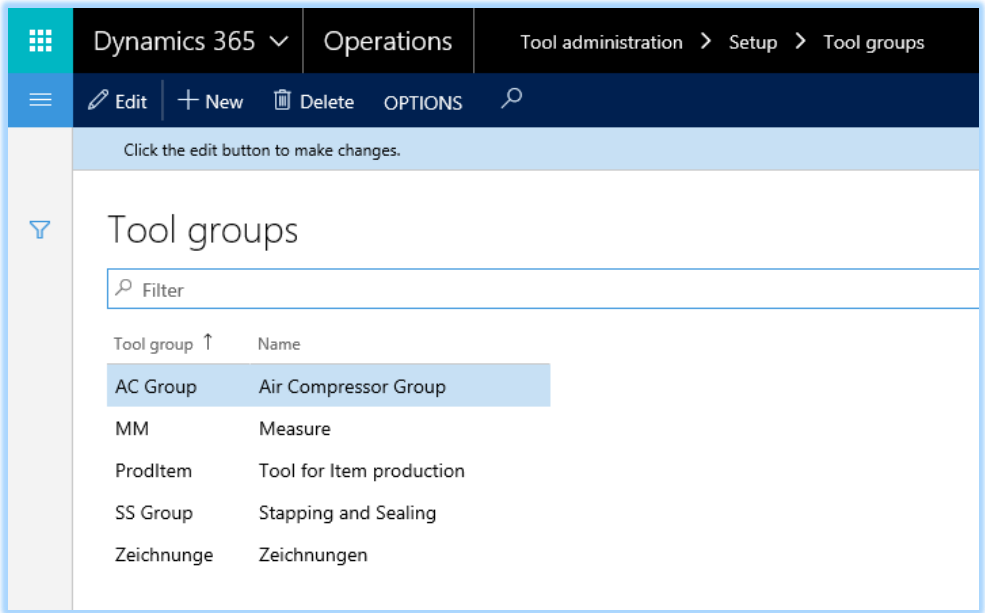
2.4 Settings and parameters /Setup and Parameter

All settings and parameters for resource management are located in the module resource management / settings

2.4.1 Investment of new resources groups /Create new tool groups

The resource group on the equipment is a mandatory entry.

- ***Call: / Tool administration> Setup> Tool groups***

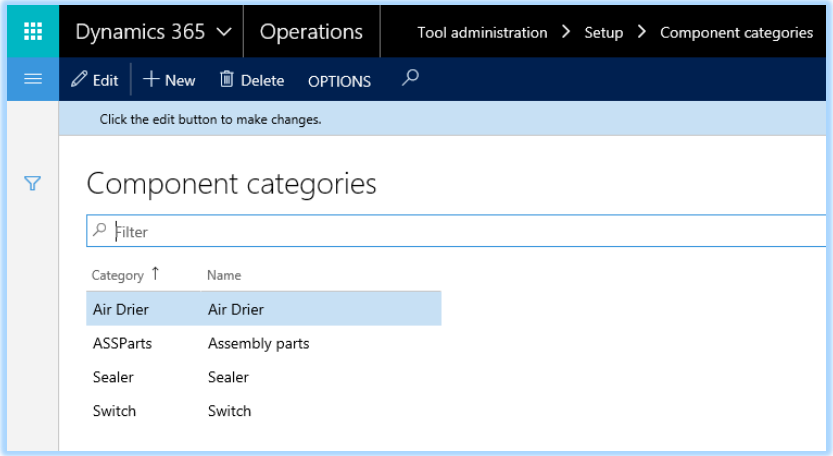


2.4.2 Plant new position Categories /Create new component categories

The position categories at the position is a mandatory entry.

©2018 Avanade Inc. All Right Reserved.

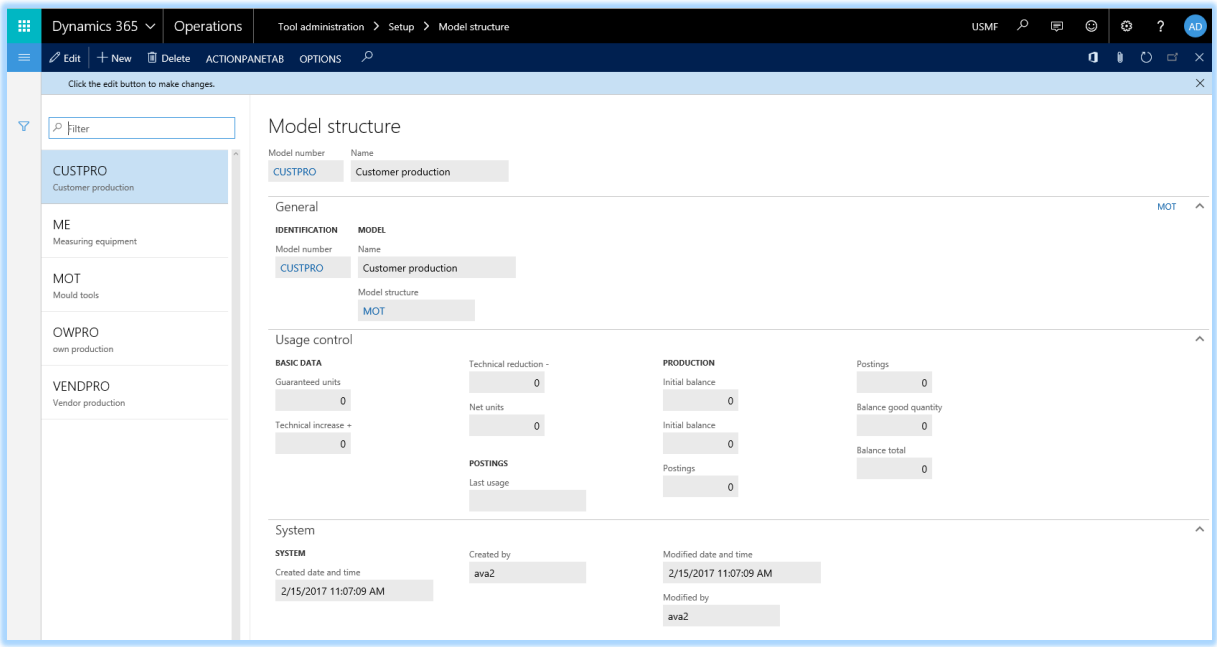
➢ ***Call: / Tool administration> Setup> Component categories***



2.4.3 System of new model structures /Create new model structure

Model structures used to define a specific structure (sorting and summary level) set. In the usage control data from the feedback on the structures are cumulative.

➢ ***Call: / Tool administration> Setup> Model structure***

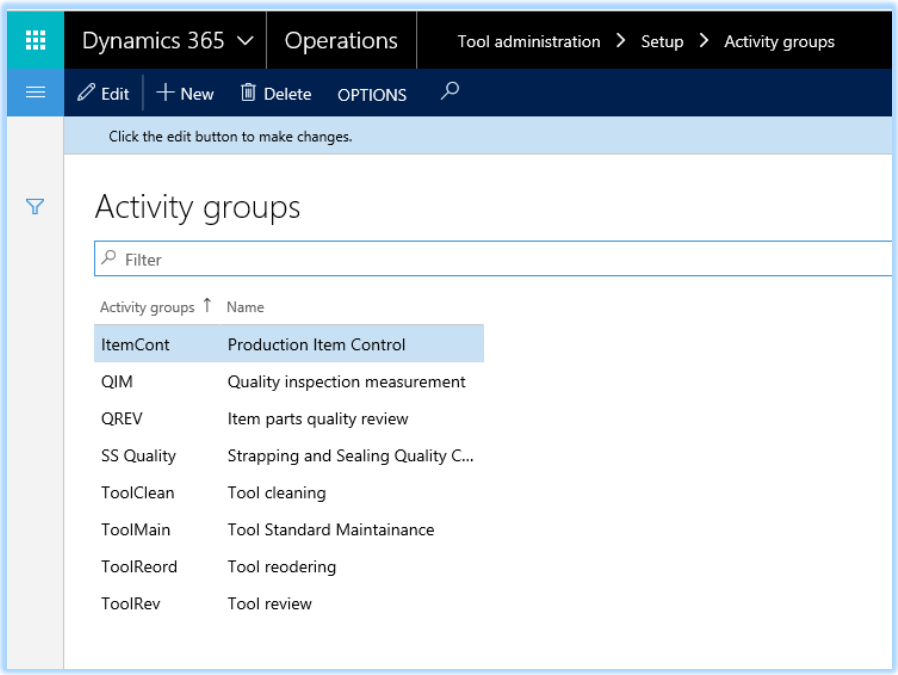


2.4.4 Conditioning of new activity groups /Create new activity Groups

The activities can be grouped to provide a better overview or to the possibility of filtering and selection. The definition of the groups is made in the settings.

➢ ***Call: / Tool administration> Setup> Activity groups***

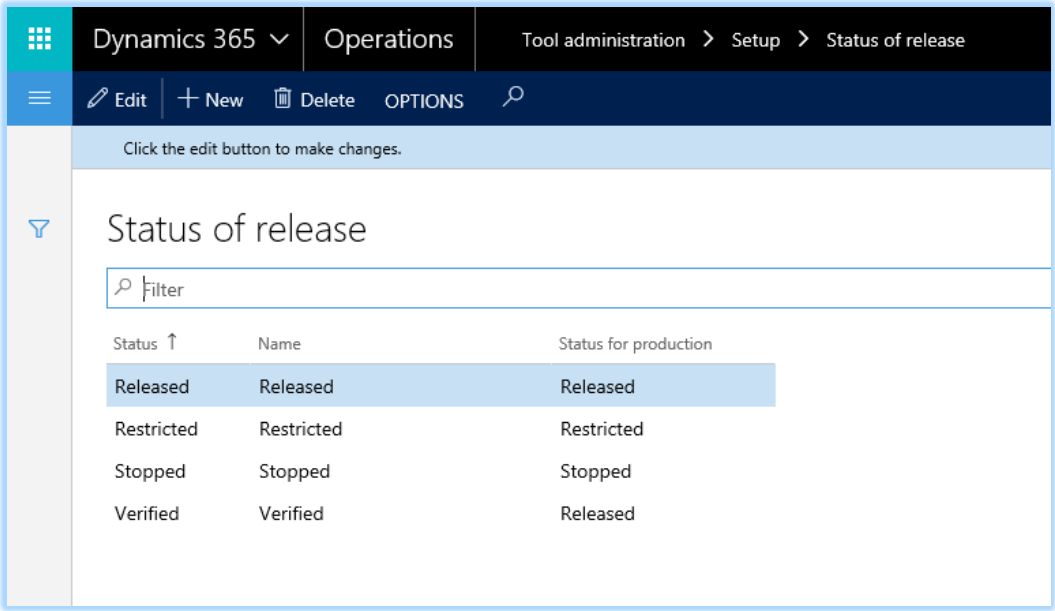
©2018 Avanade Inc. All Right Reserved.



2.4.5 Conditioning of new release status /Create release status

For the life cycle of the equipment diverse status can be freely defined. Pro status can be set as to what one should behave with respect to the use in the production.

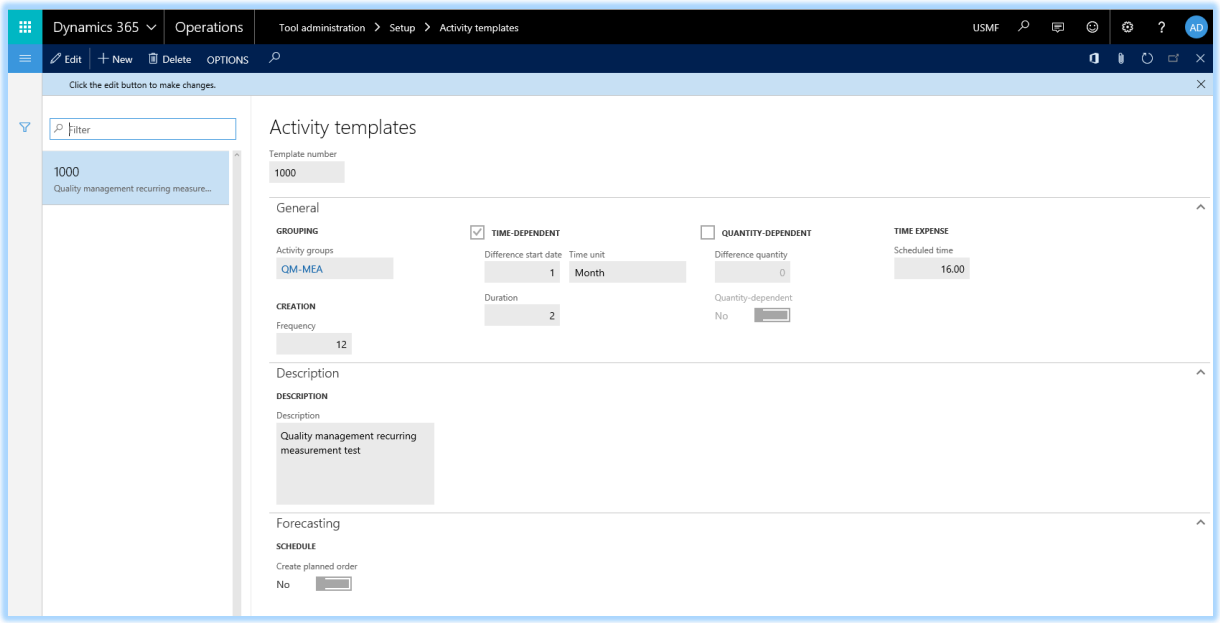
Call: / Tool administration> Setup> Status of release



2.4.6 Creation and maintenance of activity templates /Create and maintain activity templates

- ***Call: / Tool administration> Setup> Activity templates***

©2018 Avanade Inc. All Right Reserved.

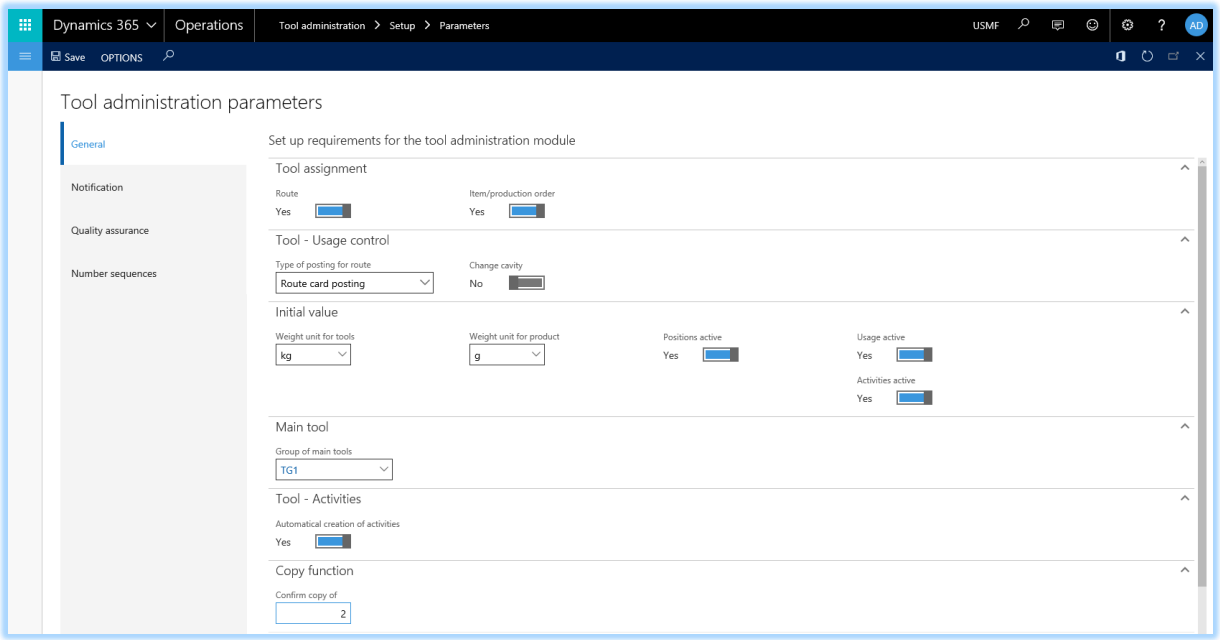


2.4.7 Resource parameters / Tool administration parameters

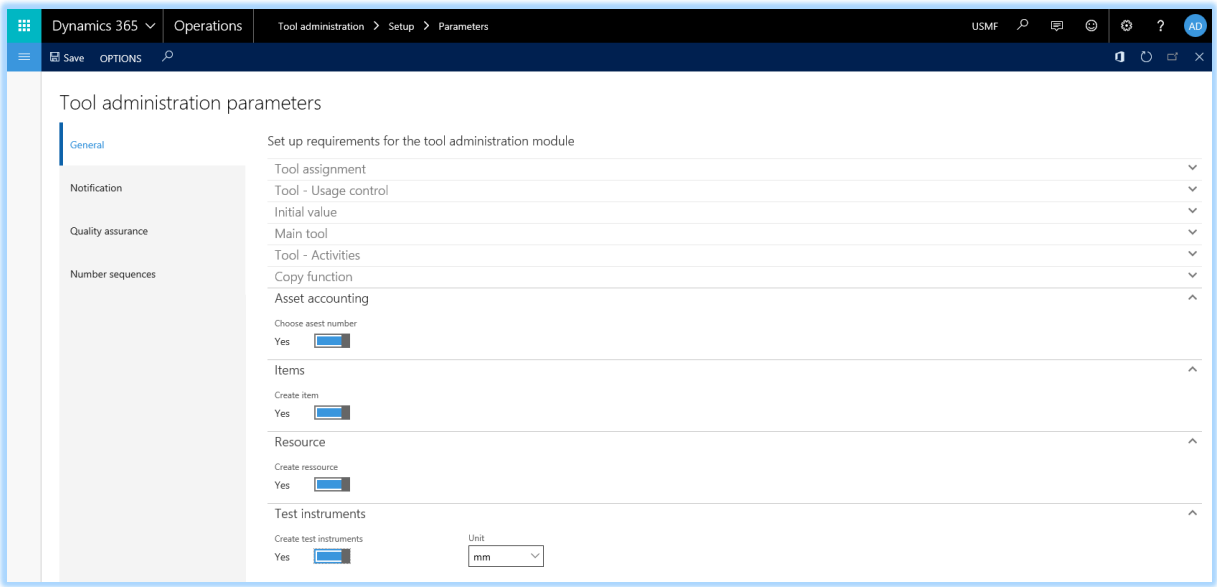
The menu item parameter allows global settings resource management. The General tab and messages have influence on the functional use of the processes.

- ***Call: / Tool administration> Setup> Parameters***

Register General /general



©2018 Avanade Inc. All Right Reserved.



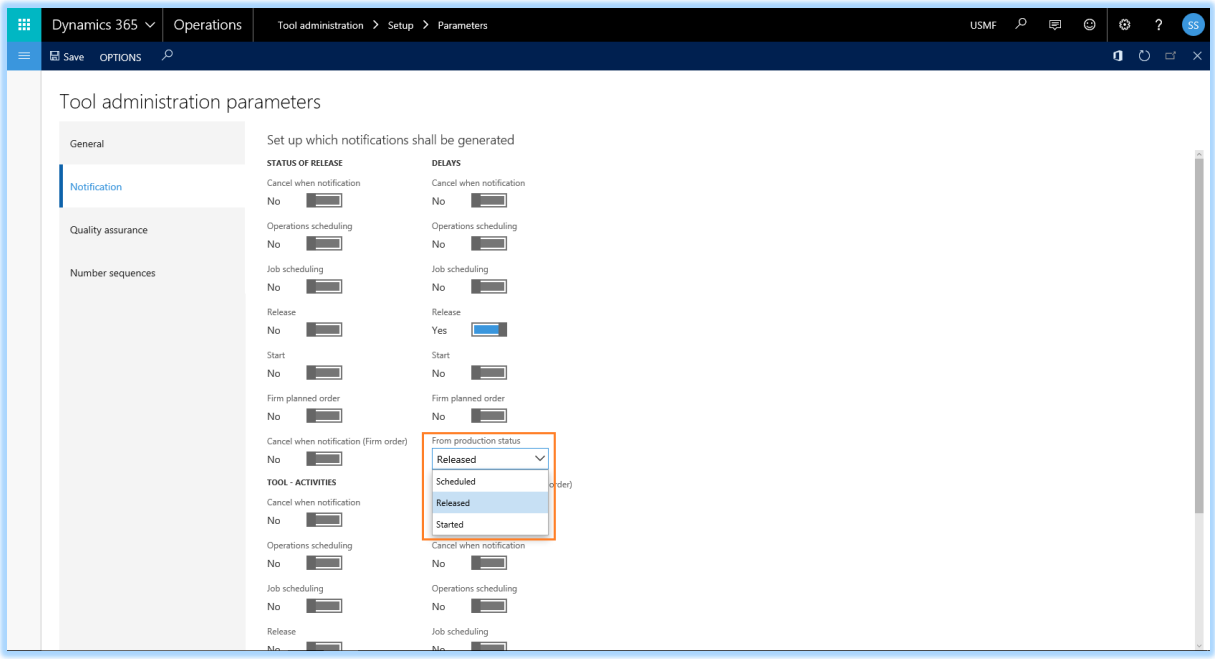
Information Register General /general	**Description**
Work schedule /route	Allows the use and allocation of resources in the work plan (operation).
Product / Production Head / Item / production order	Allows the use and allocation of resources on products and at the head of the production order.
Booking for Work Plan / Type of posting for route	Determines when the use of the resource is posted. Possible settings are ready message or operation message.
Change cavity / Change cavity	Here you can set whether in production planning and production order creation, the cavity of the tool can be changed.
Weight unit operating middleweight unit product / Weight units for tools / Weight units for product	Weight unit, in which the equipment and the product is maintained from production or purchase (Initial values can be overridden in resources)
Positions active / acitve position Performance active / Usage active Activities active / Activities active	Initial values for the resources can be overwritten as
Group the main resource / Group of main tools	Here sections for the principal resources can be applied
automatically create activities / Automatical creation of activities	Basically, setting whether automatic activities are at all possible.
Confirmation for copying / Confirm copy of	Maximum number of records in input Copy (security question)
Asset Accounting /	

©2018 Avanade Inc. All Right Reserved.

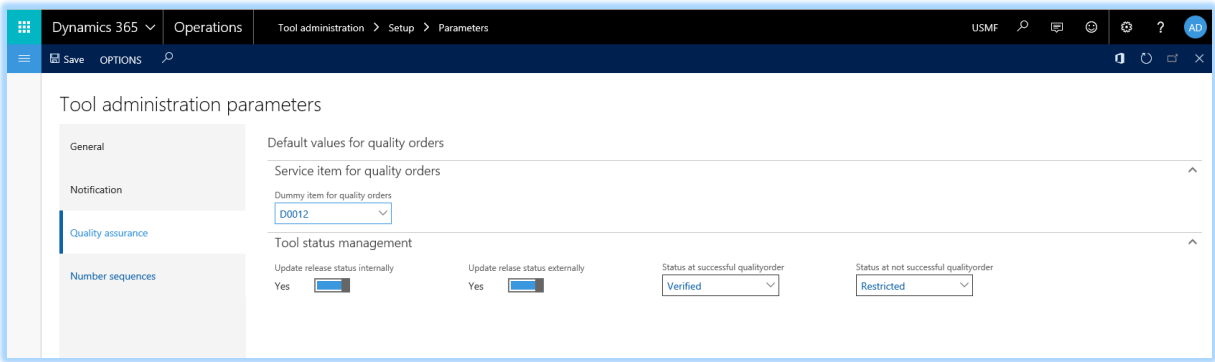
Choose asset number	Button is active - it is possible to associate with a resource with an installation number
Items / create Item	Button is active - can an article be created from the resource management out.
resource /create resource	Button is active - from the resource management out, a resource or resource group to be created.
Test instrument /create test instrument	Button is active - from the resource management out a test instrument are applied. Similarly, the default unit.

Register messages /Notification

In the Register messages can be defined to which events (termination, release, start) and in which state (release status, availability, activities) messages are issued. If the "Cancel with message" field is set, the program does not allow for further use of the equipment until the reported problem (eg resource unavailable) is resolved. The entry in the field "from production status" can be defined, from which production status of production orders should be included in the availability check.



Register Quality Inspection orders /quality assurance

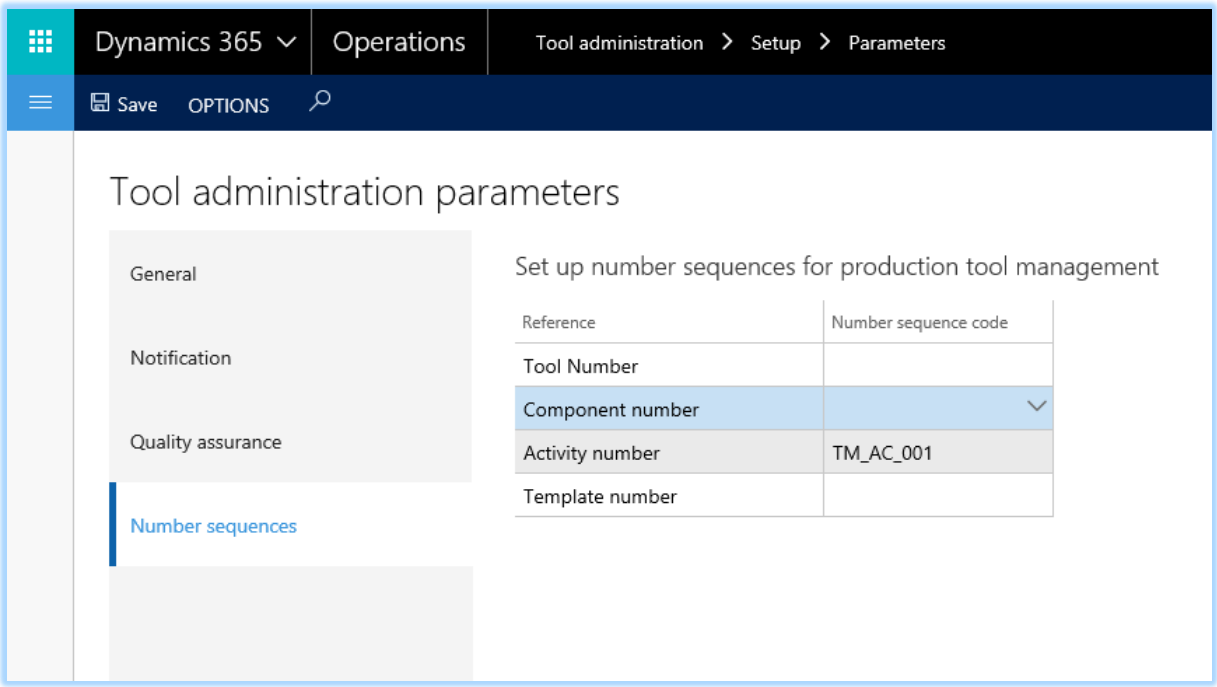


©2018 Avanade Inc. All Right Reserved.

Information Register Quality Assurance / qualtity assurance	Statement
Dummy products for quality testing contracts /Dummy item for quality orders	Shall be used for activities quality inspection jobs, so a dummy service item is to be defined. This is needed since for quality testing contracts the item number is defined as a mandatory field.
Release status internally To update / Update release status internally	Activated -> sets the approval status upon successful completion of the quality audit engagement.
Release status externally To update / Update release status externally	Activated -> sets the approval status upon successful completion of the quality audit engagement.
Status upon successful Quality audit engagement / Status at successful quality order	will set the status to successful completion of a quality audit engagement.
Status in unsuccessful Quality audit engagement / Status at not successful quality order	Status is set by not successfully completing a quality audit engagement.

Register Number Ranges /Number sequences

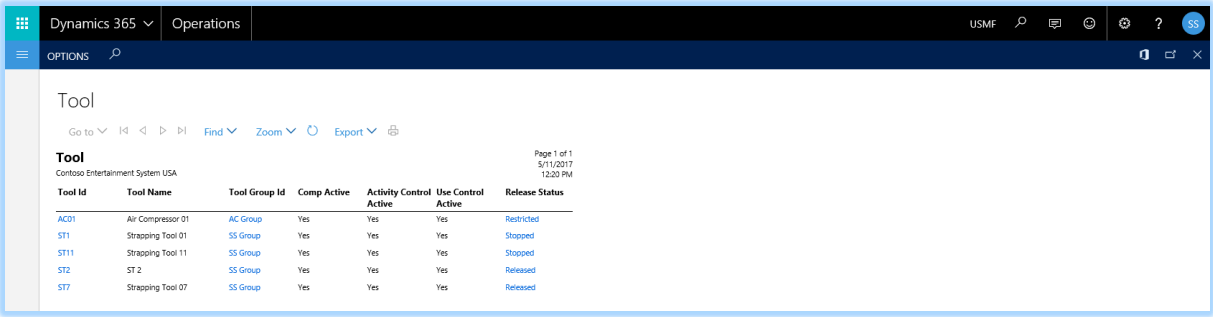
Here the number ranges which are required in the resource management applied.



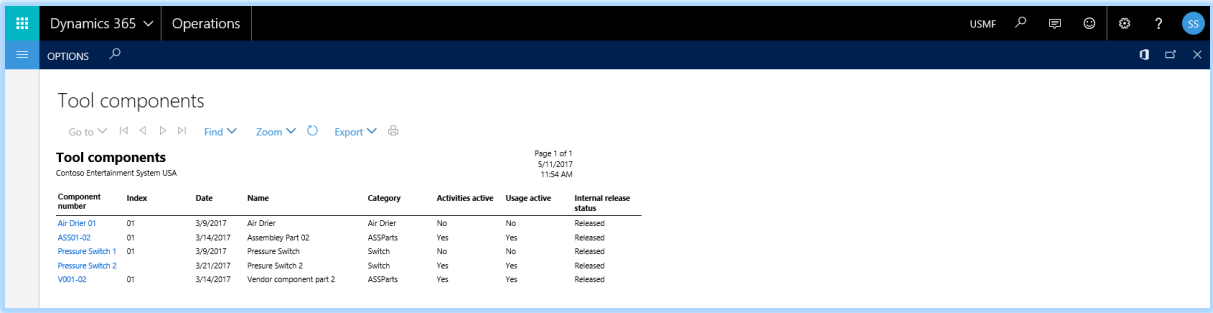
©2018 Avanade Inc. All Right Reserved.

2.5 Reports of Resource Management /Reports Tool Administration

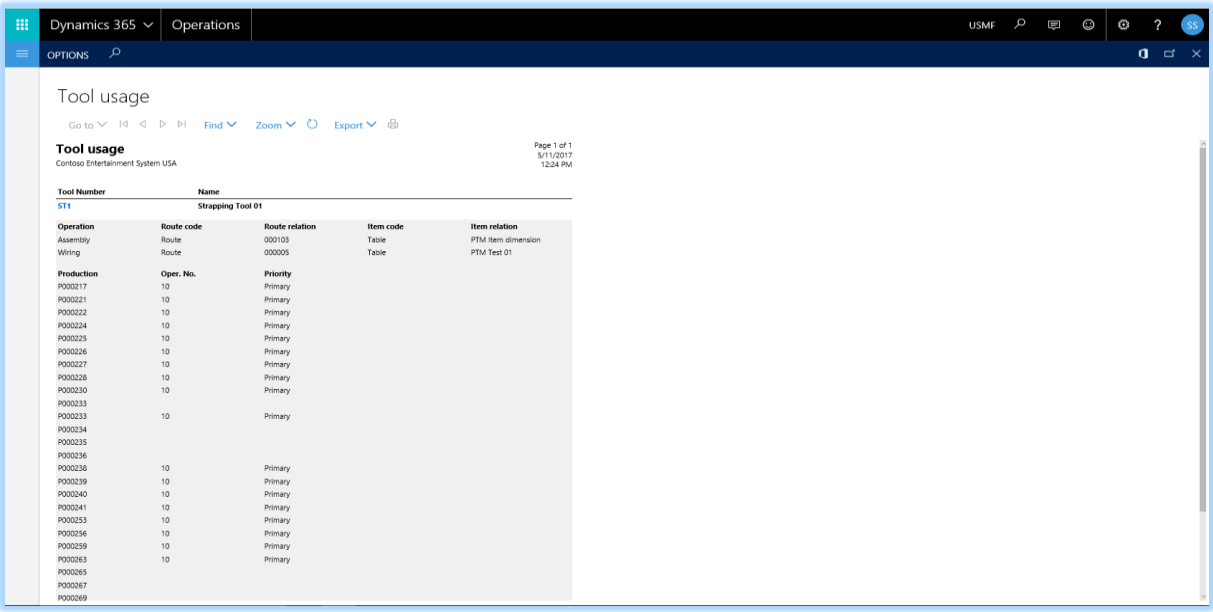
Below we look at five standard reports that are provided with the resources management.



Tool Id	Tool Name	Tool Group Id	Comp Active	Activity Control Active	Use Control Active	Release Status
AC01	Air Compressor 01	AC Group	Yes	Yes	Yes	Restricted
ST1	Strapping Tool 01	SS Group	Yes	Yes	Yes	Stopped
ST11	Strapping Tool 11	SS Group	Yes	Yes	Yes	Stopped
ST2	ST 2	SS Group	Yes	Yes	Yes	Released
ST7	Strapping Tool 07	SS Group	Yes	Yes	Yes	Released



Component number	Index	Date	Name	Category	Activities active	Usage active	Internal release status
Air Drier 01	01	3/9/2017	Air Drier	Air Drier	No	No	Released
ASS01-02	01	3/14/2017	Assembley Part 02	ASSParts	Yes	Yes	Released
Pressure Switch 1	01	3/9/2017	Pressure Switch	Switch	No	No	Released
Pressure Switch 2		3/21/2017	Presure Switch 2	Switch	Yes	Yes	Released
V001-02	01	3/14/2017	Vendor component part 2	ASSParts	Yes	Yes	Released

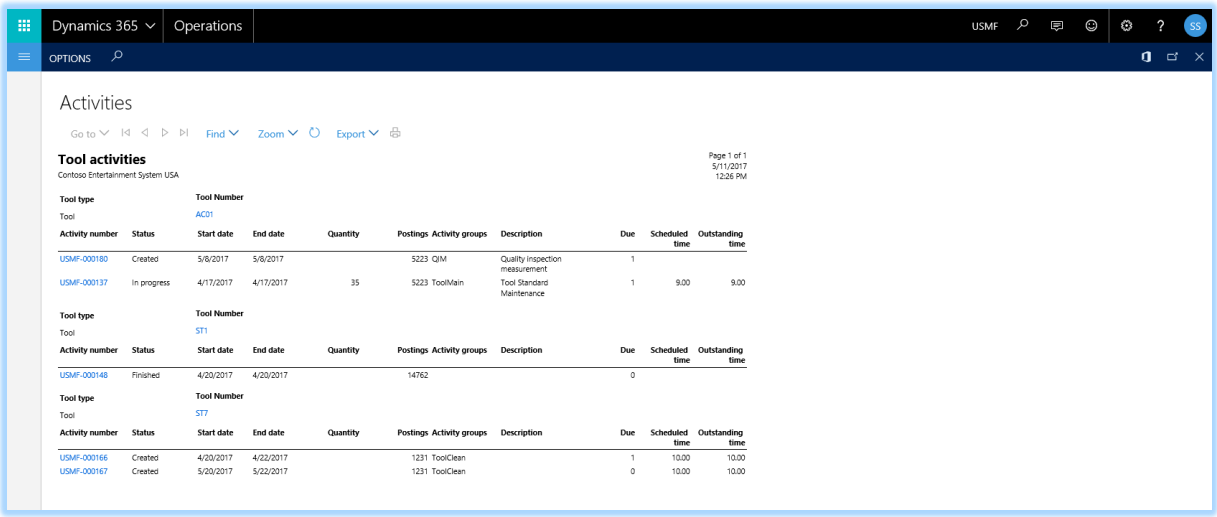


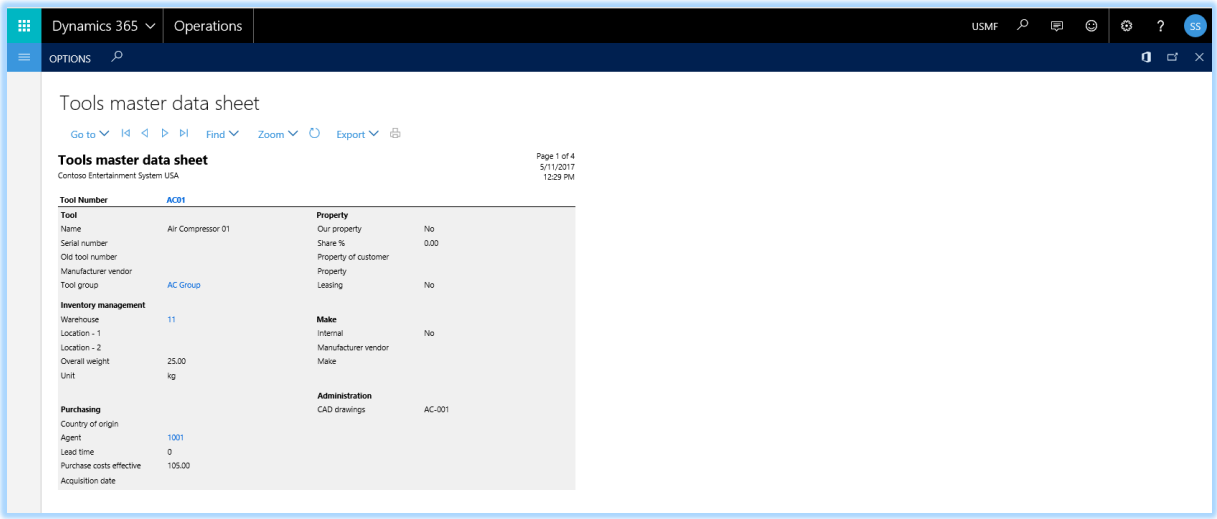
Tool Number	Name
ST1	Strapping Tool 01

Operation	Route code	Route relation	Item code	Item relation
Assembly	Route	000103	Table	PTM item dimension
Wiring	Route	000005	Table	PTM Test 01

Production	Oper. No.	Priority
P000217	10	Primary
P000221	10	Primary
P000222	10	Primary
P000224	10	Primary
P000225	10	Primary
P000226	10	Primary
P000227	10	Primary
P000228	10	Primary
P000230	10	Primary
P000233		
P000233	10	Primary
P000234		
P000235		
P000236		
P000236	10	Primary
P000239	10	Primary
P000240	10	Primary
P000241	10	Primary
P000253	10	Primary
P000256	10	Primary
P000259	10	Primary
P000263	10	Primary
P000265		
P000267		
P000269		

©2018 Avanade Inc. All Right Reserved.

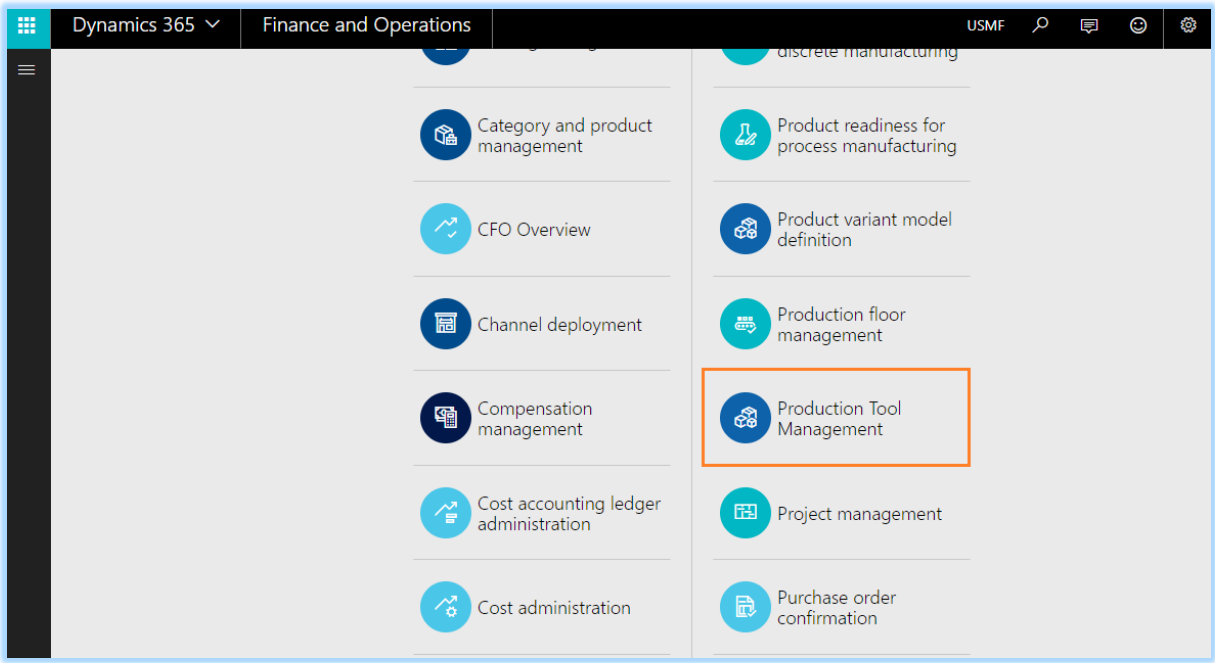


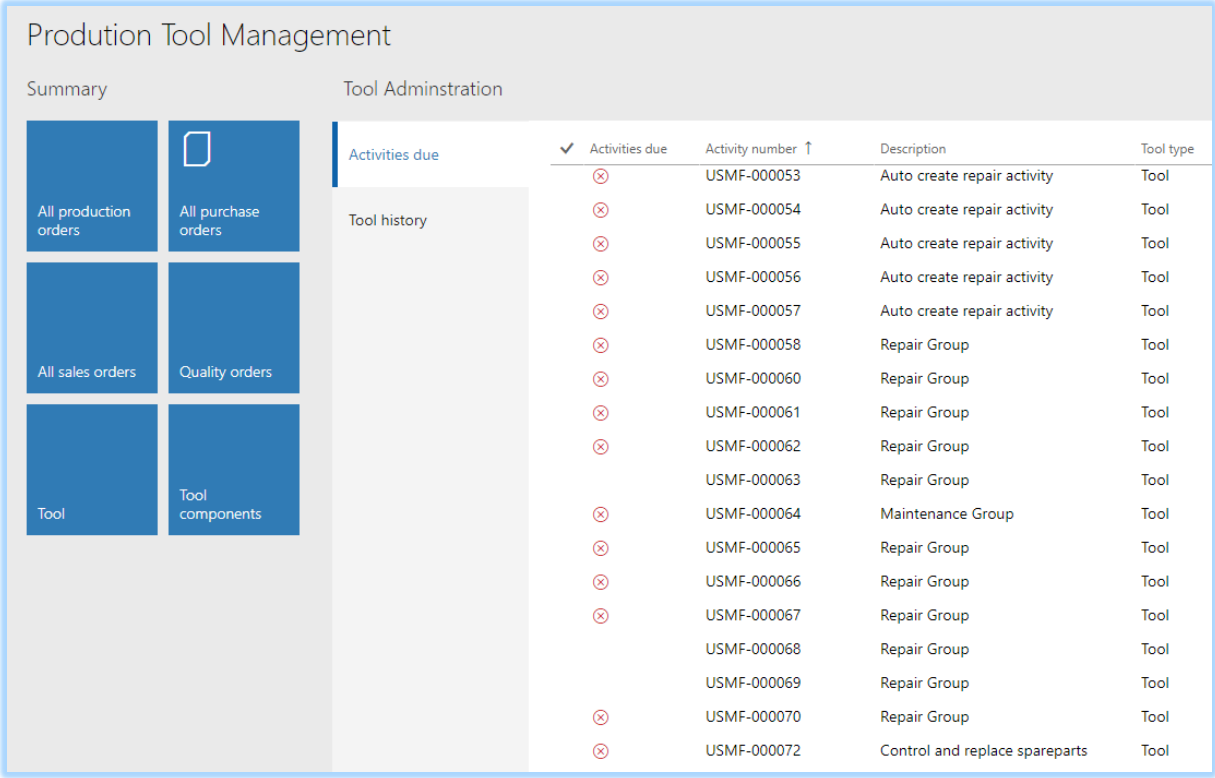


2.6 WorkSpace for Production tool management / Tool administration

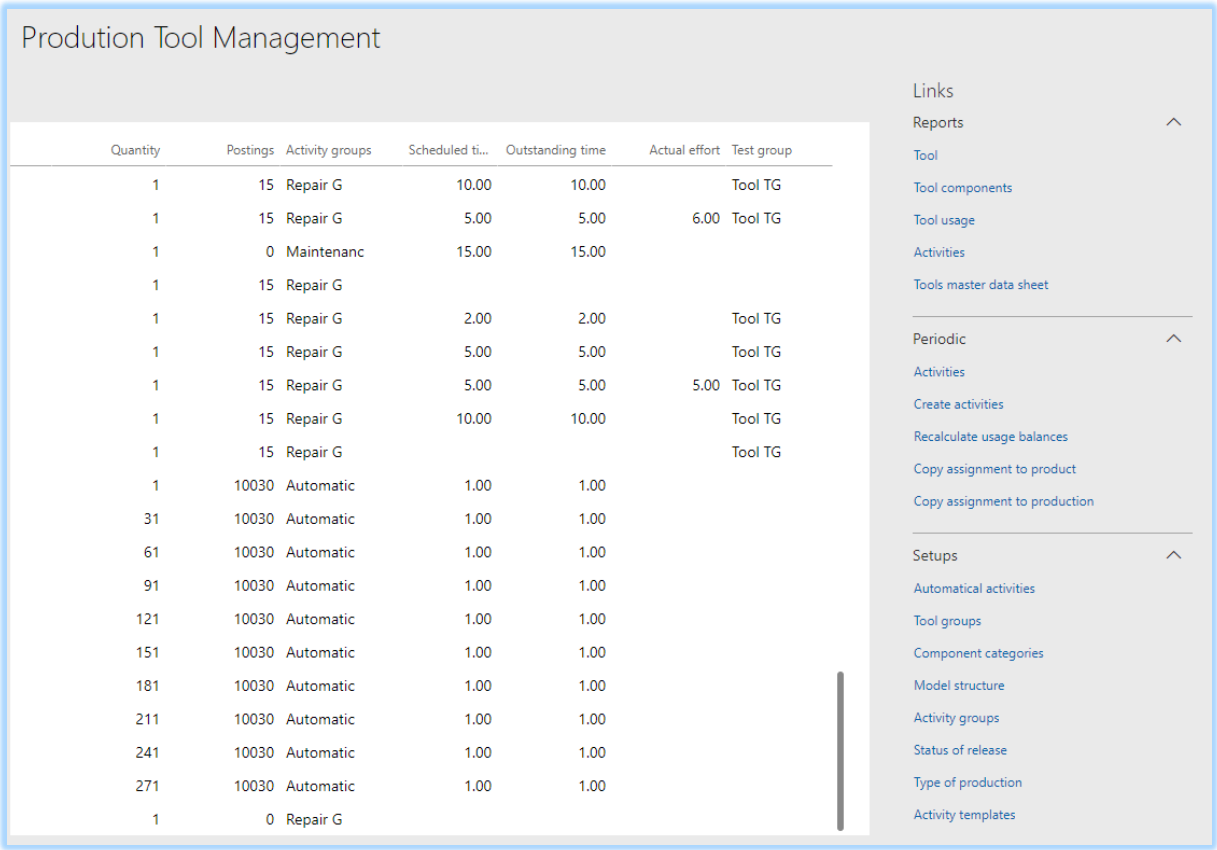
Avanade Production tool management asset workspace provides the 360° cockpit view of the underlying business functionalities throughout Dynamics 365 for Finance & Operations business application from the areas of production module, accounts payable and accounts receivables.

©2018 Avanade Inc. All Right Reserved.





©2018 Avanade Inc. All Right Reserved.



2.7 Integration overview resources and resource positions /Integration overview tools and tools components

The resource and the resource positions are similarly constructed in the basic structure, however, in terms of information and integration with other 365 for operations modules it is different. The following matrix is therefore an overview of which were that main functionality present in this module.

Function (Alphabetical Order)	**resources** **Tools**	**Resource position /** **Tools components**
Function Button /Function		
Resources Copy /Copy Tools	Yes /Yes	Yes /Yes
activities ➢ Activities Overview /Activities overview ➢ Create Activities /Create new activities ➢ Automatic Activities /Automatic aktivities	Yes /Yes	Yes /Yes
Model tree	Yes /Yes	No / No

©2018 Avanade Inc. All Right Reserved.

Show ➢ Reservations /postings ➢ Mapping resources /Assignment Tools ➢ Using resources /Usage Tools ➢ Equipment History /Tools history	Yes /Yes	Yes /Yes
To write an article /Create new item	Yes /Yes	Yes /Yes
Create resource /Create new resource	Yes /Yes	Yes /Yes
Creating resource group /Create new resource group	Yes /Yes	Yes /Yes
Create Test Instrument /Create new test instrument	Yes /Yes	Yes /Yes
Register		
General /general	Yes /Yes	Yes /Yes
procurement ➢ Manufacturer /Vendor ➢ Reference project /project for manufacturing ➢ Reference Maintenance /project for maintainance ➢ Plant number /Link to fixed asset	Yes /Yes	Yes /Yes
register Technically		
➢ Release status Internal /Internal release status	Yes /Yes	Yes /Yes
➢ Release status External /External release status	Yes /Yes	Yes /Yes
➢ Drawing Management /Administration CAD to CAM drawings	Yes /Yes	Yes /Yes
➢ Electrodes Administrative /Electrodes administration	Yes /Yes	Yes /Yes
➢ Product dimensions /Product dimension	Yes /Yes	No / No
➢ Product Specifications /Product specification	Yes /Yes	No / No
Register Performance assessment /Usage control		
➢ Performance assessment /Usage control	Yes /Yes	Yes /Yes
➢ External production (vendor, customer) /External production (Vendor, Customer)	Yes /Yes	No / No
Register Quality Assurance /Qualtiy assurance	Yes /Yes	No / No
Register Planning /Planning	Yes /Yes	No / No

©2018 Avanade Inc. All Right Reserved.

3 Installation

3.1 Requirements /Prerequisites

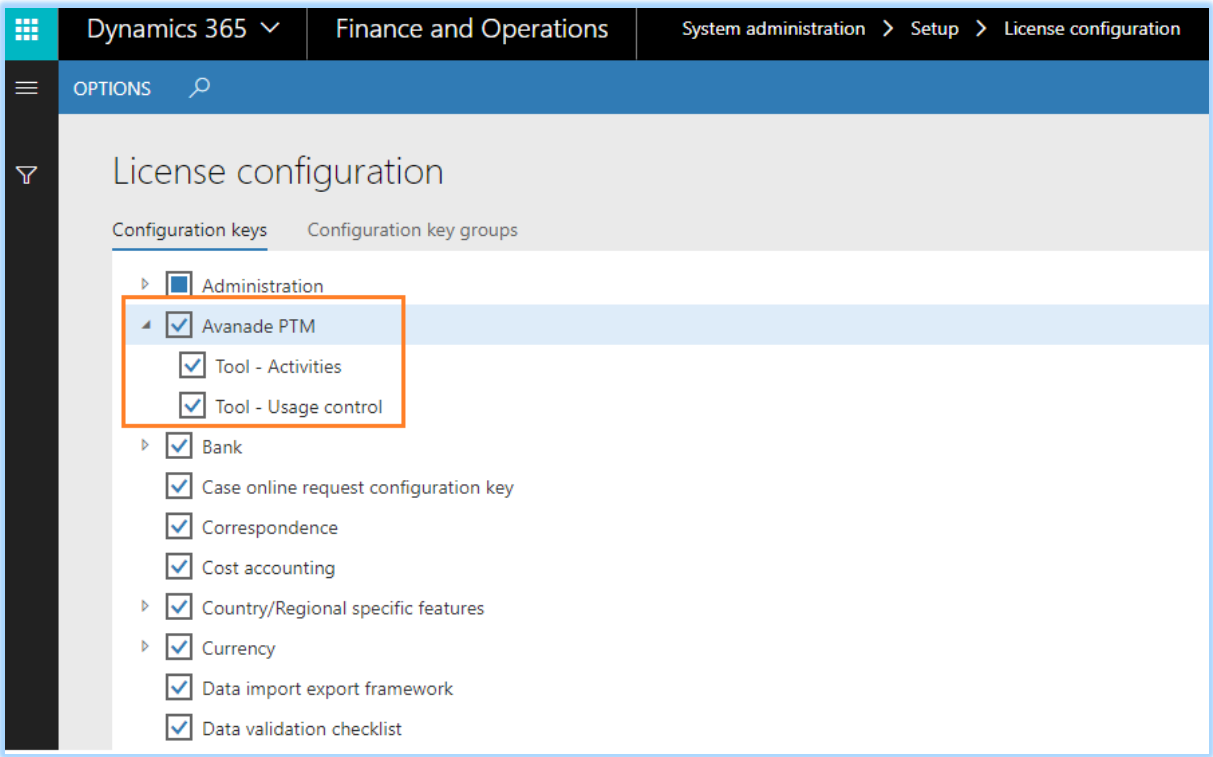
There are provided a current version of the AX2012, R2, R3 and Dynamics 365 for operations for following Microsoft Dynamics AX module licenses:

- Trading
- Production I
- Production II

3.2 configuration /system configuration

Model file and License file must be installed for accessing this asset and its functionalities.

➢ ***Call: / System Administration > setup > License configuration***



4 Disclaimer

All rights reserved. The work is protected by copyright. Any use beyond the narrow limits of copyright law is not permitted without written permission of the publisher.

All trademarks belong to their respective manufacturers.

Microsoft Dynamics is a registered trademark of Microsoft Corporation in the United States and / or other countries.